

# JOURNAL

OF THE

## AMERICAN VETERINARY MEDICAL ASSOCIATION

### Convention Number

90th Annual Meeting, Toronto, July 20-23, 1953

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Volume 122

JUNE 1953

Number 915

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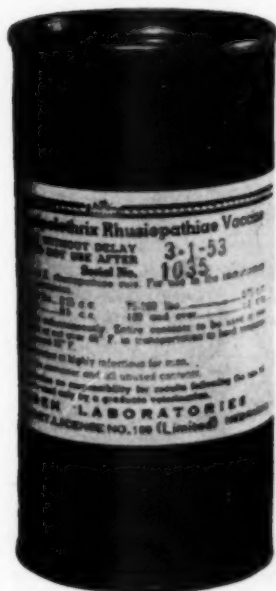
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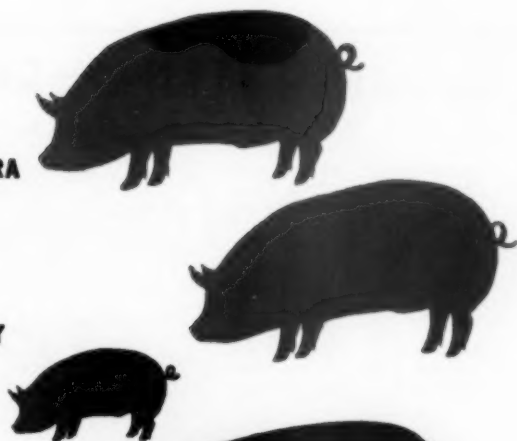
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DEPARTMENT OF VETERINARY MEDICINE

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# Over-all Requirements of Sanitizers for the Dairy Industry

by

WILLIAM A. HADFIELD

*Technical Service Department*

*Pennsylvania Salt Manufacturing Company*

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Sanitizers acceptable for general use may fail to meet the special requirements of the dairy industry. A glance at these requirements explains why. Chemical sanitizers for treating cleaned dairy utensils and equipment must not only reduce the bacteria population to a safe public health level but must also meet these special requirements:

1. Impart no chemical residue to milk and other dairy products.
2. Produce no off flavors nor odors in milk and other dairy products.
3. Be non-injurious to dairy metals when used as directed.
4. Be non-irritating to cows' udders and teats and farmers' and dairy plant operators' hands.
5. Not interfere with starter culture activity in the production of acid-ity for special milks and cheeses.

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# AVMA ☆ Report

## Veterinary Medical Activities

◆ The Board of Governors (Drs. Edwin Laitinen, W. L. Boyd, and J. A. McCallam) met in Chicago on May 4-5. Their meeting was preceded by a meeting of a subcommittee of the Executive Board, which was appointed last December to study the set-up and organization of the many Association standing committees with a view to possible recommendations for re-defining and reorganizing their duties and functions.

★ ★ ★

◆ Executive Secretary Hardenbergh met on April 14 with the Committee on Local Arrangements for the Toronto convention. On the same trip, he represented the Association at a farewell dinner tendered Dr. Wm. Moynihan on the occasion of his retirement as director of the Ontario office of the Health of Animals Division, Dominion Department of Agriculture (*see the News*, p. 510).

★ ★ ★

◆ During April, Editor W. A. Aitken was in Washington, D.C., for a conference on handling news of emergency epizootics, on the 6 and 7; at Sioux Falls, S. Dak., for a Veterinarian's Market Day meeting, on the 16; and at Lafayette, Ind., attending the National Institute on Animal Agriculture conference (*see p. 507 for details*) on the 20 and 21.

★ ★ ★

◆ President-Elect J. A. McCallam represented the Association at a hearing on the extension of the doctors draft law conducted by the Armed Services Committee of the House of Representatives on April 22, 1953. For details of the AVMA statement see "News From Washington" page.

★ ★ ★

◆ Twenty seniors from the School of Veterinary Medicine, University of Illinois, visited the AVMA office on April 16 as part of a trip to Chicago to inspect meat-packing plant operations.

★ ★ ★

◆ The Fellowship Committee of the Research Council held its usual spring meeting at the AVMA office on April 27 to consider applications for fellowships under the Research Fund Program. Those present were Drs. L. C. Ferguson, *Chairman*; Robert Getty, *Secretary*; C. A. Brandly, C. H. Cunningham, M. A. Emmerson, James Farquharson, and R. D. Turk.

★ ★ ★

◆ The Council on Education held its annual meeting at the headquarters office in Chicago on May 25.

★ ★ ★

◆ Assistant Executive Secretary C. D. Van Houweling attended a meeting of the television committee of the Michigan State Veterinary Medical Association and State College at East Lansing, Mich., on April 29, 1953. The AVMA is cooperating in the kinescoping of a series of programs prepared by the Michigan committees.

★ ★ ★

◆ President-Elect J. A. McCallam spent a day following the recent meeting of the Board of Governors reviewing committee appointments which he will make as president of the Association.

★ ★ ★

◆ AVMA staff members, Editor W. A. Aitken and Assistant Executive Secretary C. D. Van Houweling, participated in a series of radio interviews over station W.L.S. (*see p. 501 for details*).



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1. Suter, R. J. (1951), Communication to Abbott Laboratories.  
2. Majillon, E. A. (1952), M. Amer. Vet., July 3.  
3. Phillips, L. R. (1952), Vet. Medicine, July 4.  
4. Brumer, C. N. (1951), Communication to Abbott Laboratories.  
5. Ruobush, E. E. (1951), Communication to Abbott Laboratories.

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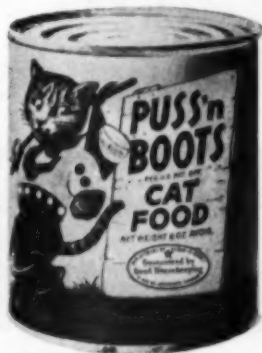
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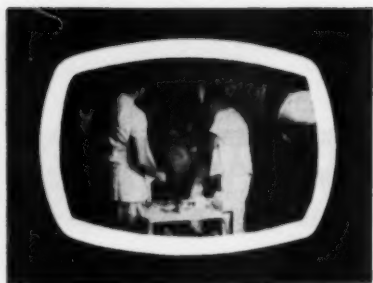
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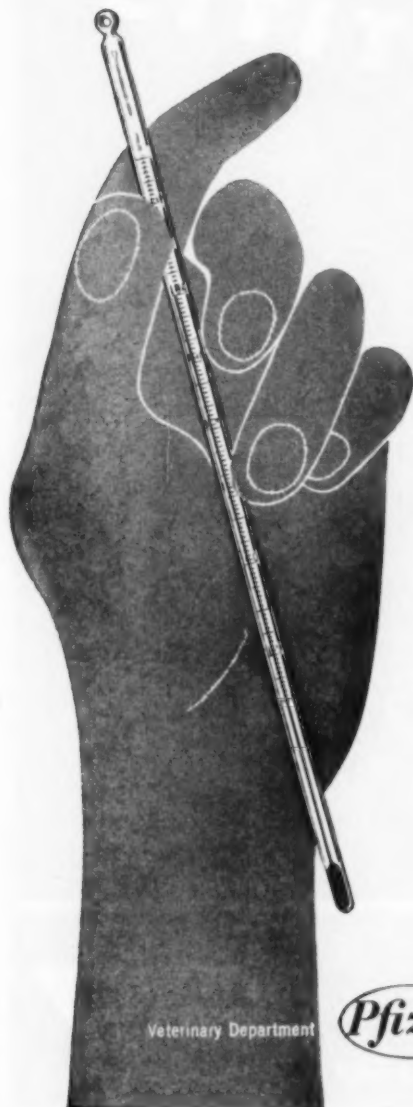
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## hyperthermia



Veterinary Department

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Antibiotic Division, CHAS. PFIZER & CO., INC.  
Brooklyn 6, N. Y.

IMPROVED  
**Daripen-S**

*presents a wider  
antibacterial spectrum*

# in MASTITIS

STREPTOCOCCUS  
AGALACTIAE

ESCHERICHIA  
COLI

STAPHYLOCOCCUS  
AUREUS

Mastitis can be caused by various organisms, and the combination of sulfamerazine and sulfathiazole with two proven antibiotics, penicillin and dihydrostreptomycin, significantly broadens the range of effectiveness.

	100-cc Vials <i>Each 10-cc contains:</i>	7.5-cc Tubes <i>Each 7.5-cc tube contains:</i>
Procaine Penicillin G	100,000 Units	100,000 Units
Dihydrostreptomycin	100 mg.	100 mg.
Sulfamerazine	7.5 % (w/v)	10 % (w/v)
Sulfathiazole	7.5 % (w/v)	10 % (w/v)

Gelled in a free-flowing base of peanut oil with 3 % (w/v) aluminum monostearate.

**S.E. Massengill**

**Veterinary Division**

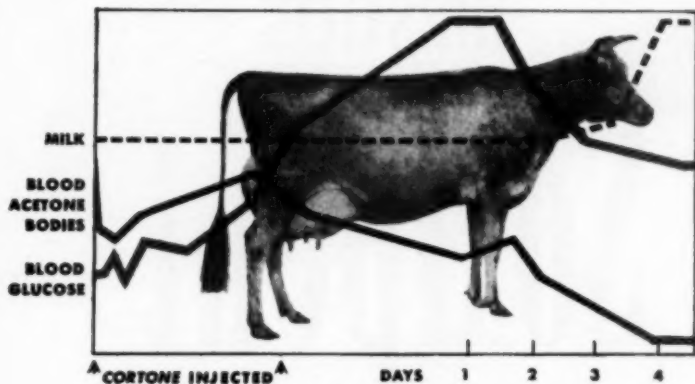
Bristol, Tennessee

ANNOUNCING

Saline Suspension of

# Cortone<sup>®</sup> VETERINARY

ACETATE  
(CORTISONE ACETATE, MERCK)



## For Dramatic Relief of Bovine KETOSIS

A single intramuscular injection of CORTONE Acetate *Veterinary* often effects complete remission of symptoms in both pre- and postpartum ketosis of dairy cows, in many instances after other forms of therapy have failed. Blood sugar levels have returned to normal in twenty-four hours, and milk production has been restored to normal in as little as three days.

Paralleling the dramatic results achieved by CORTONE in human medicine, CORTONE Acetate *Veterinary* also has been found effective against rheumatoid arthritis and inflammatory conditions of the eyes and skin. Its field of usefulness in animals continues to broaden as research progresses.

**CORTONE Acetate *Veterinary*** is available through a number of veterinary pharmaceutical manufacturers, in addition to pharmacies. Use is restricted to the veterinary profession.

CORTONE is the registered  
trade-mark of Merck & Co., Inc.  
for its brand of cortisone.



**MERCK & CO., INC.**

*Manufacturing Chemists*

RAHWAY, NEW JERSEY

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FORT DODGE

Now!  
For a more  
effective attack  
against

mastitis

# Soxipent

2 antibiotics    2 sulfonamides

One 10 cc. dose supplies —

Procaine Penicillin G . . . . .	100,000 units
Dihydrostreptomycin . . . . .	100 mg.
Sulfisoxazole . . . . .	750 mg.
Sulfathiazole . . . . .	750 mg.

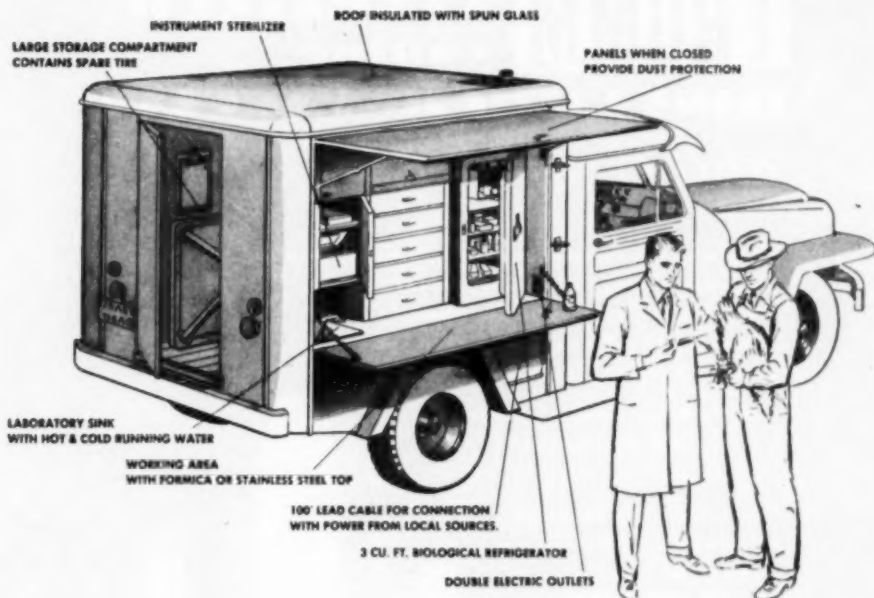
**S**OXIPENT's potent combination of the four chemotherapeutic agents listed above is the answer to today's increasing incidence of mastitis caused by staphylococci, as well as by streptococci and coliform bacteria — especially pseudomonas varieties.

SOXIPENT is indicated in cases where the presence of either gram-positive or gram-negative organisms is known or suspected. SOXIPENT has shown excellent *in vitro* inhibition of *Staph. aureus*, *Str. agalactiae*, *A. aerogenes*, *Ps. aeruginosa* and *E. coli*.

Supplied in 10 cc. tubes and 100 cc. vials. Complete descriptive literature on request.

**FORT DODGE LABORATORIES, INC.**  
**FORT DODGE, IOWA, U.S.A.**

# A mobile clinic designed for the practicing veterinarian



## MODEL **VJR** THE VETERINARY SERVICE UNIT



### Equipment Includes:

3 KW Electric Generator, Hot and Cold Water Tanks, Ample Storage Facilities, Choice of Willys, Chevrolet, Ford, GMC, Dodge and other chassis

Model VJR is an economically priced mobile unit of all-steel construction. As a complete Clinic-on-Wheels, it overcomes the discomfort and inconvenience of make-shift vehicle arrangements and provides the progressive veterinarian with modern facilities in giving service and treatment. Model VJR may be purchased completely furnished with instruments and accessories, or with standard equipment to which the recent graduate or established veterinarian can add his own special equipment.

For full information on Model VJR and on our fleet of Veterinary and Medical Coaches, contact —

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# **FROMM VIABLIZED** **canine** **DISTEMPER VACCINE** *reaches new heights*

Ever continuing in the development of improved biologicals — originators of many "firsts" — FROMM LABORATORIES now announce a Viablized Vaccine (chick embryo origin) with a new stabilizer that assures more active, modified virus particles.

Thus, the doctor is able to administer a more viable, more durable immunity producing agent.

Identify this improved vaccine by the new convenient package.

- Supplied in one dose and 10 dose packages

**FROMM**  
LABORATORIES,  
INC.

Grafton, Wisconsin, U.S.A.

CONTACT YOUR LOCAL INDEPENDENT DISTRIBUTOR OR THE LABORATORIES DIRECT

# FORWARD *in* HEALTH

Whenever you use products under the NLC label—you know they're unsurpassed in advance research, production and potency—products that will help you sustain vigorous health in the herds under your care.

Scientifically formulated and tested in laboratory and field—NLC biologicals and pharmaceuticals march forward—into new avenues of research—into new principles of disease prevention and cure — for greater livestock protection.

Depend on the NLC label—it is made available **ONLY** to graduate veterinarians.



NLC

**SERVING GRADUATE VETERINARIANS EXCLUSIVELY**

**THE NATIONAL LABORATORIES**  
CORPORATION  
KANSAS CITY

# Be Prepared!



KOAGAMIN, potent parenteral hemostatic proved in the veterinary field,<sup>1,2,3</sup> acts fast—in minutes. But every second counts in hemorrhage—keep it handy!

KOAGAMIN acts fast by its direct action on the blood—unlike vitamin K, useful only in low blood prothrombin, and often requiring hours to take effect. In such cases, use *both* for faster control.

## KOAGAMIN®

(AQUEOUS SOLUTION OF OXALIC AND MALONIC ACIDS)  
TO CONTROL INTERNAL AND EXTERNAL BLEEDING

### STOPS HEMORRHAGE IN MINUTES

#### INDICATIONS

**PREOPERATIVELY**... reduces oozing during surgery

**POSTOPERATIVELY**... controls secondary bleeding

**THERAPEUTICALLY**... controls uterine bleeding, bimatemesis, epistaxis (nosebleed) in blood horses, purpura, to clear bloody milk in cows, etc.

#### DOSAGE:

Small Animals, 1/2-3 cc.; Large Animals, 5-20 cc.

1. Scott, M. L. Notes on a Successful Effort to Treat Horses Which Bleed, *The Blood Horse*, LXIV:1008 (Nov.) 1952.
2. Blamey, E. R. Coagulation in: Seeping Hemorrhage — Evaluation of Koagamin, *J. Am. Vet. M. A.* 119:291, 1951.
3. Klausman, B. S. The Use of a New Chemotherapeutic Agent to Arrest Bleeding in Animals, *Vet. Med.* XLVI: 282 (July) 1951.

*"Keep a vial where you can lay your hands on it."*

AVAILABLE to Graduate Veterinarians in 20 cc. diaphragm-capped vials at Veterinary Supply Houses—\$4.50 per vial—discounts on 6's and 12's to the Veterinarian. Write direct for literature.



AVAILABLE THROUGH YOUR VETERINARY SUPPLY HOUSE

**CHATHAM PHARMACEUTICALS, INC.**

NEWARK 2, NEW JERSEY,

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DISTRIBUTED IN CANADA BY: AUSTIN LABORATORIES LIMITED, GUELPH, ONTARIO

# EPHCO Nutriment

## A High Potency Vitamin-Mineral Food Supplement For Breeding Farms

Each Ounce Contains:

Vitamin A (from fishliver oil) .....	50,000 USP Units
Vitamin D (from irradiated ergosterol) ..	9,375 USP Units
Vitamin B <sub>1</sub> .....	45 mg.*
Vitamin B <sub>2</sub> .....	45 mg.
Vitamin B <sub>6</sub> .....	10 mg.
Vitamin E .....	30 mg.
Menadione (Vitamin K Active) .....	10 mg.
d-Calcium Pantothenate .....	50 mg.
Niacin .....	200 mg.
Calcium (from dicalcium phosphate) ....	1.45 Gm.
Phosphorus (from dicalcium phosphate) ..	1.12 Gm.
Iron (from ferric pyrophosphate) .....	12 mg.
Iodine (from potassium iodide) .....	2 mg.
Manganese (from manganese sulfate) ....	4 mg.
Copper (from copper sulfate) .....	2 mg.
Cobalt (from cobalt sulfate) .....	1 mg.
Zinc (from zinc sulfate) .....	1 mg.
Potassium (from potassium chloride) ....	1 mg.
Magnesium (from magnesium sulfate) .....	2 mg.
Sulphur .....	8 mg.

In a base of wheat Germ and Flavoring

\*1 mg. (milligram) = 1,000 mc. or mcgm. (micrograms)

IN GRANULAR FORM

### Guaranteed Stability and Palatability

Packed in Ten Pound Drums

*Inquiries are invited from veterinarians*



Equine

PHARMACEUTICAL CORPORATION

50 EAST 32nd STREET • NEW YORK 22, NEW YORK

# **The M·L·V Record**

*Reports on M·L·V usage show:*



*Total compiled figures from all reports received  
by us from veterinarians since release  
of M·L·V for sale (August 1951):*

**99% favorable results  
1% losses from all causes**

Figures as of May 1, 1953.

**FORT DODGE**

**SPECIFY M·L·V** — the original *porcine origin* Modified Live Virus Hog Cholera Vaccine. Patented and produced by FORT DODGE LABORATORIES, INC., Fort Dodge, Iowa.

U. S. Patent 2,594,180.

# Journal of the American Veterinary Medical Association

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VOL. 122

JUNE, 1953

No. 915

## The Toronto Meeting

### *A Message from President Boyd*

TORONTO, the Queen City of Ontario, Canada, extends a most cordial hand of welcome to the veterinarians of North America. When the American Veterinary Medical Association convenes in Toronto, July 20-23, 1953, there will be established, in all probability, an all-time record of attendance. Toronto's geographical location, midway by rail between New York and Chicago, possessing ultra-modern airport facilities, plus an excellent system of highways, makes it an ideal convention city. This is coronation year and all Canada is celebrating. The festivities of the coronation will be capitalized upon in the entertainment features of the AVMA.

The scientific program, in which more than 150 veterinarians and other scientists will participate, is a most attractive one. Additional time is provided for the television program and this is true also of the programs in the sections on large and small animal practice. No phase of veterinary medicine has been neglected; therefore, regardless of one's interest, one will be busy at all times.

#### **Facts About Our Neighbor which May Be of Interest**

Did you know

That Canada is an independent and sovereign member of the British Commonwealth of Nations?

That the population of Canada as of June 1, 1952, was 14,430,000?

That the history of the City of Toronto dates back almost three hundred years?

That the name "Toronto" is of Huron Indian origin, signifying "a place of meeting"?

That Ontario Province, situated between the provinces of Quebec and Manitoba, has close to one third of Canada's population and is one and one-half times the size of Texas?

That one will encounter only a minimum of border "red tape" and delay in crossing over into Canada?

That the summer months in Toronto are comfortably warm? Days of extreme heat and relatively high humidity are rarely encountered.

And, finally, did you know that the Canadian dollar is at present worth more than the United States dollar?

Following the close of the meeting, everyone will be ready for relaxation. To accomplish this, one does not have far to



President W. L. Boyd

go as Ontario is known as Canada's all-year vacation province. Good roads leading to a vast area of densely wooded country in which there exist thousands of lakes

and numerous streams offer a wide range of vacation entertainment.

I hope to see you in Toronto.

### AVMA Officers, 1952-1953

President—W. L. Boyd, St. Paul, Minn.  
President-Elect—J. A. McCallam, Washington, D. C.  
First Vice-President—L. A. Mosher, Atlanta, Ga.  
Second Vice-President—M. L. Morris, Topeka, Kan.  
Third Vice-President—H. S. MacDonald, Toronto, Ont.  
Fourth Vice-President—C. H. McElroy, Stillwater, Okla.  
Fifth Vice-President—M. Weadon, Chevy Chase, Md.  
Executive Secretary—J. G. Hardenbergh, Chicago, Ill.  
Assistant Executive Secretary—C. D. Van Houweling, Chicago, Ill.  
Treasurer—H. E. Kingman, Chicago, Ill.

### Executive Board

*(Year in which terms expire is shown in parentheses)*

Chairman—Edwin Laitinen (1957), West Hartford, Conn.  
District I—T. Lloyd Jones (1957), Guelph, Ont.  
District II—S. F. Scheidy (1953), Drexel Hill, Pa.  
District III—O. Norling-Christensen (1953), Wilmette, Ill.  
District IV—R. S. Sugg (1954), Auburn, Ala.  
District V—C. F. Schlotthauer (1955), Rochester, Minn.  
District VI—Joseph M. Arburua (1956), San Francisco, Calif.  
District VII—E. E. Wegner (1955), Pullman, Wash.  
District VIII—W. G. Brock (1956), Dallas, Texas.  
District IX—Edwin Laitinen (1957), Hartford, Conn.  
District X—W. R. Krill (1954), Columbus, Ohio.

### EX OFFICIO MEMBERS OF EXECUTIVE BOARD

W. L. Boyd (1954), St. Paul, Minn.  
J. A. McCallam (1955), Washington, D. C.  
John R. Wells (1953), West Palm Beach, Fla.

### Board of Governors

Edwin Laitinen, *Chairman*; W. L. Boyd; J. A. McCallam.

### Executive Committee — AVMA House of Representatives

P. G. MacKintosh, Washington, *Chairman*  
J. W. Harrison, Colorado  
A. A. Husman, North Carolina  
H. E. Kingman, Sr., Wyoming  
J. A. McCallam, District of Columbia  
J. T. Schwab, Wisconsin  
R. C. Snyder, Pennsylvania

# House of Representatives

(As of April 21, 1953)

	<i>Votes</i>	<i>Delegate</i>	<i>Alternate</i>
Alabama	(2)	McKenzie Heath	L. E. Irby
Arizona	(1)	Keith Lassen	
Arkansas	(2)	W. L. Thomas	Herbert Shull, Jr.
California	(5)	C. E. Wicktor	W. J. Zontine
Colorado	(2)		
Connecticut	(2)	Niel W. Pieper	Irving R. Vail
Delaware	(1)	E. L. Symington	Charles C. Palmer
Dist. of Columbia	(2)	William T. S. Thorp	E. R. Goode, Jr.
Florida	(2)	Jack O. Knowles	Karl R. Owens
Georgia	(3)	C. C. VonGrimp	Thos. J. Jones
Idaho	(2)	Arthur P. Schneider	L. V. Ruebel
Illinois	(5)	A. G. Misener	A. E. Bott
Indiana	(4)	Homer D. Carter	George W. Gillie
Iowa	(5)	C. D. Lee	F. B. Young
Kansas	(3)	F. L. Hart	J. F. Knappenberger
Kentucky	(2)	J. A. Winkler	F. M. Kearns
Louisiana	(2)	W. T. Oglesby	F. B. Wheeler
Maine	(1)	Alfred E. Coombs	J. Frank Witter
Maryland	(2)	L. J. Poelma	M. H. Jacobs
Massachusetts	(3)	Leon A. Paquin	Bertram S. Killian
Michigan	(4)	L. H. LaFond	Paul V. Howard
Minnesota	(4)	Fred Gehrman	C. H. Wetter
Mississippi	(2)		
Missouri	(3)	Paul L. Spencer	O. E. Ellis
Montana	(2)	G. A. Morrison	A. F. Hayes
Nebraska	(3)	W. F. Monson	W. J. Nelson
Nevada	(1)	Joseph B. Key	W. F. Fisher
New Hampshire	(1)	Joseph Seraichick	Eric Simmons
New Jersey	(3)	J. R. Porteus	Robert P. Lawrence
New Mexico	(1)	Tom Evans	
New York	(5)	F. F. Fehr	E. S. Markham
North Carolina	(2)	A. A. Husman	M. M. Leonard
North Dakota	(2)	D. A. Wire	D. F. Eveleth
Ohio	(5)	Fred J. Kingma	E. W. Roberts
Oklahoma	(2)	C. H. Fauks	C. H. McElroy
Oregon	(2)		
Pennsylvania	(5)	Raymond C. Snyder	J. Robert Brown
Rhode Island	(1)	J. W. Armstrong	Ralph Povar
South Carolina	(2)	M. R. Blackstock	B. C. McLean
South Dakota	(2)	D. L. Cotton	O. H. Stalheim
Tennessee	(2)	R. A. Gathman	Kenneth Whittington
Texas	(3)	Alvin A. Price	M. R. Callihan
Utah	(2)	R. W. Gold	Hugh Hurst
Vermont	(2)	A. W. Wright	C. T. Whitney
Virginia	(2)	T. P. Rowe	C. R. Pastors
Washington	(3)	P. G. MacKintosh	T. Robert Phelps
West Virginia	(1)	Victor H. Miller	Elvin R. Coon
Wisconsin	(4)	J. T. Schwab	Roland Anderson
Wyoming	(2)	Harry E. Kingman	James E. Prier
Army	(2)	J. L. Hartman	William E. Jennings
NAFV*	(2)	L. T. Hopkins	F. W. Crawford
Canal Zone	(1)		
Puerto Rico	(1)	O. A. Lopez-Pacheco	Enrique Toro, Jr.
Alberta	(2)	J. Gordon Anderson	J. E. Rattray
British Columbia	(2)	J. G. Jervis	
Manitoba	(2)	H. H. Ross	W. R. Giesbrecht
Nova Scotia	(2)	R. McG. Archibald	L. G. Neilly
Ontario	(5)	R. H. Wright	H. R. Potter
Quebec	(3)		
Saskatchewan	(2)	J. S. Fulton	E. L. Brown
Cuba	(4)	Roberto Parajon	Angel M. Morales

\*National Association of Federal Veterinarians.

## The 1953 Session—Official Call

The Ninetieth Annual Meeting of the American Veterinary Medical Association will be held at the Royal York Hotel, Toronto, Ont., July 20-23, 1953.

Executive sessions of the Committee on Budget, Board of Governors, and Executive Board will be held at the Royal York Hotel beginning Tuesday, July 14, and running through Friday, July 17.

The House of Representatives will convene on Saturday, July 18. The first session will start at 9:30 a.m., eastern daylight saving time. Delegates are urged to time their arrival for not later than Friday night so that the session will not be delayed.

The Opening Session of the convention is scheduled for 9:00 a.m., Monday, July 20, in the Concert Hall of the Royal York. Registration facilities will start functioning Sunday noon, July 19, and continue daily thereafter.

Following the opening ceremonies, formal addresses, and presentation of awards, the nomination of officers for the ensuing year will take place. A president-elect, five vice-presidents, and a treasurer are to be elected. Installation of officers will take place at a brief session Thursday noon, July 23. There will be joint installation ceremonies for both Auxiliary and Association officers.

Section meetings will be held at the Royal York beginning Monday afternoon, July 20, and continuing through Thursday morning, July 23. A number of group meetings, meetings of related organizations, and special conferences will be held as shown in the program schedule.

The meetings of the Women's Auxiliary, including sessions of their executive board, house of representatives, and other functions for women will be held as shown in the program.

The President's Reception and Dance, with special entertainment, will be held on Wednesday evening, July 22, at the Palace Pier, following the alumni dinners.

Convention registration will open Sunday noon, July 19, on the convention floor of the Royal York, where the exhibits will be displayed beginning at 8:30 a.m., Monday, July 20.

Headquarters of the AVMA, the Committee on Local Arrangements, the press room, and other convention activities will be located in Parlor A on the convention floor of the hotel.

This issue of the JOURNAL contains practically complete details of the Toronto program. Members are urged to study it for information about the varied and attractive program events of professional interest and the social entertainment that will feature the 1953 meeting.

### The Toronto Waterfront on Lake Ontario

—Ontario Department, Travel and Publicity



## Executive and Legislative Sessions (Royal York Hotel)

### Tuesday, July 14

7:30 p.m. Committee on Budget — *Room 2.*

### Wednesday, July 15

9:00 a.m. Board of Governors first session — *Room 2.*

2:00 p.m. Board of Governors, second session — *Room 2.*

### Thursday, July 16

9:00 a.m. Executive Board, first session — *Room 7.*

2:00 p.m. Executive Board, second session — *Room 7.*

7:30 p.m. Executive Board, third session — *Room 7.*

### Friday, July 17

9:00 a.m. Executive Board, fourth session — *Room 7.*

2:00 p.m. Executive Committee — House of Representatives — *Room 2.*

### Saturday, July 18

9:30 a.m. House of Representatives, first session — *Room 9.*

2:00 p.m. House of Representatives, second session — *Room 9.*

7:00 p.m. House of Representatives, third session (if necessary) — *Room 9.*

### Thursday, July 23

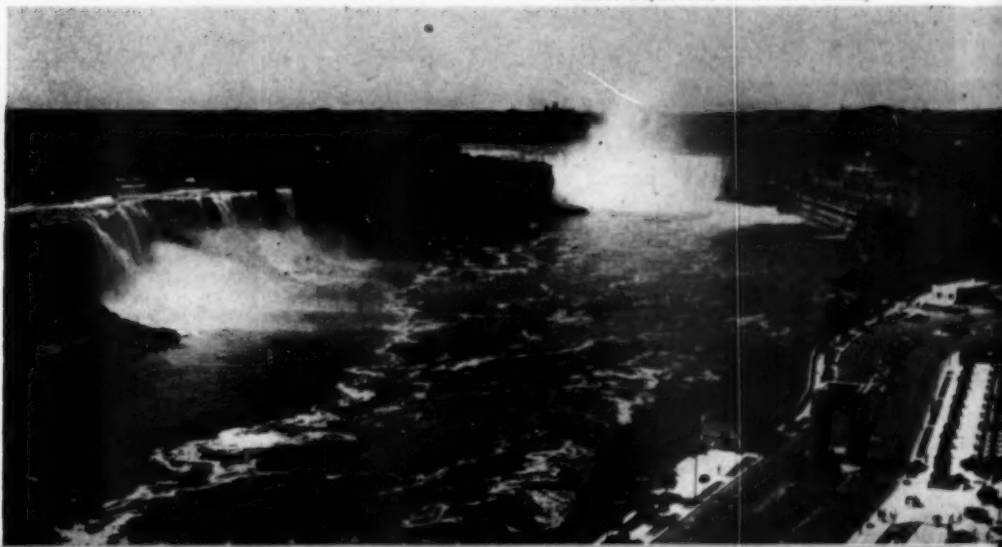
2:00 p.m. Executive Board, final session — *Room 7.*

### Election and Installation of Officers

Nominations for the election of officers of the Association will take place at the end of the Opening Session on Monday morning, July 20. If a ballot election is required on account of there being more than one nomination for the respective offices, polls will be set up in the AVMA executive secretary's office in the Royal York Hotel on Tuesday, July 21. The officers to be elected at Toronto are: president-elect, five vice-presidents, and treasurer. There will be joint installation ceremonies for AVMA and Auxiliary officers at the Closing Session on Thursday, July 23.

This view of Niagara Falls, overlooking Rainbow Gardens and Oakes Garden Theatre, was made from the carillon tower at the Canadian terminus of Rainbow bridge.

—Ontario Department, Travel and Publicity



## Message from the Chairman, Committee on Local Arrangements

This is a proud year in Canada because we crown Elizabeth the Second, the namesake of the illustrious Elizabeth the First, the Good Queen Bess, whose daring sea captains circumnavigated the world, harried the Spanish Main and, finally, with the defeat of the Armada broke the Spaniards' hold as the dominant power in the then known world. The first settlement in what is now continental United States was the colony which Sir Walter Raleigh set out on Roanoke Island in Virginia in 1607. In fact, that whole area which encompassed more than the present-day State of Virginia was named in honor of the virgin queen of England. Thus, while our two great countries hold the future in common and have had much of our past in common, it seems only right that you should help us celebrate the crowning of another Elizabeth and to this festive occasion we bid you welcome.

Realizing that a little learning is a dangerous thing, your program committee has seen to it that, for those who attend, a lot of learning will be offered. What we Canadians like most, is that this learning will be offered in pleasant surroundings. Your headquarters and the seat of all learning will be in Canada's luxurious convention hotel, the Royal York. Actually, it is most modern and also is the largest hotel in the British Commonwealth. It is a fit and proper

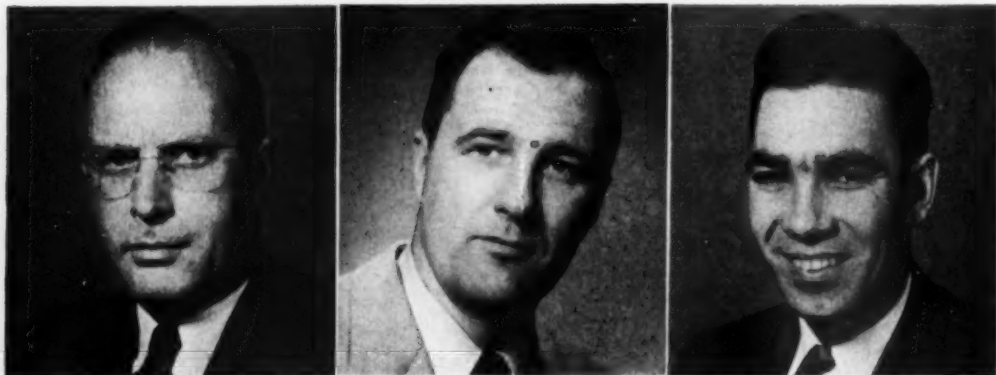
setting for the Ninetieth Annual Meeting of the American Veterinary Medical Association.

We have in Toronto all the attractions of a large city and then some. We have a full-fledged castle, complete with secret passageways and all the appurtenances from crenelated towers down to complete sets of armor, for the medieval knight. The Casa Loma is a real castle, though the only ghosts it has are those of city tax collectors who have had their troubles during the past quarter century. During the convention week, harness racing will be on at the Thorncliffe Raceway and our badges are all we need for admission. We have a fine assortment of art galleries, museums, triple-"A" baseball, lacrosse, and many other attractions outside our regular program. Toronto is the "gateway to the north" and in one to two hours' drive you can be in the heart of our holiday land of lakes and hills, of warm bright days, and cool nights. For those of you who would like a real northern vacation complete with good fishing, the Muskoka, Haliburton Highlands, and the Kawartha Lakes are just up the road a few miles.

We, in Canada, are pleased and proud to extend our hospitality and to welcome you in this our Coronation Year.

s/E. RENDLE BOWNESS, *Chairman,  
Committee on Local Arrangements.*

### General Officers of the Local Committee



Dr. E. Rendle Bowness (left), General Chairman; Dr. Harold Worton, Vice-General Chairman; and Dr. V. C. R. Walker, Secretary.

Reception—Hospitality



Dr. J. E. Mumford, Chairman,  
and Dr. H. S. MacDonald, Co-Chairman

Entertainment



Dr. C. L. McGilvray, Chairman  
and Dr. A. C. Secord, Co-Chairman

Hotels and Housing



Dr. J. E. Leeson

Chairmen, Local Subcommittees

AVMA Convention

Toronto, July 20-23, 1953

Registration—Information



Dr. N. D. Scollard

Golf



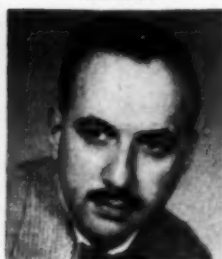
Dr. J. J. Richardson

Decorations



Dr. A. F. Bain

Television



Dr. C. A. V. Barker

Garages, Parking, Airports



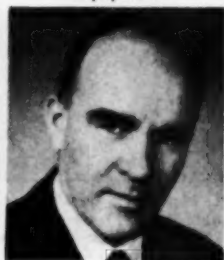
Dr. G. H. Collacutt

Alumni Dinners



Dr. D. J. McLellan

Meeting Rooms—  
Equipment



Dr. J. H. Ballantyne

Exhibits



Dr. J. N. Stratas

Publicity



Dr. J. G. MacKay

## Committee on Local Arrangements Ninetieth Annual Meeting

### Officers

E. Rendle Bowness, *General Chairman*  
Harold Worton, *Vice-General Chairman*  
V. C. R. Walker, *Secretary*

### Executive Committee

E. R. Bowness, *Chairman*  
A. F. Bain  
J. H. Ballantyne  
G. H. Collacutt  
C. A. V. Barker  
J. E. Leeson  
H. S. MacDonald  
J. G. MacKay  
C. L. McGilvray  
D. J. McLellan  
J. E. Mumford  
J. J. Richardson  
N. D. Scollard  
Alan Secord

J. N. Stratas  
V. C. R. Walker  
Harold Worton  
Mrs. S. T. Bodendistel  
Mrs. E. R. Bowness  
Mrs. T. W. Hawke  
Mrs. J. A. Henderson  
Mrs. J. E. Leeson  
Mrs. H. M. Le Gard  
Mrs. C. L. McGilvray  
Miss Emily Mumford  
Mrs. R. J. Pinkney  
Mrs. J. J. Richardson  
Mrs. Alan Secord

### Committees

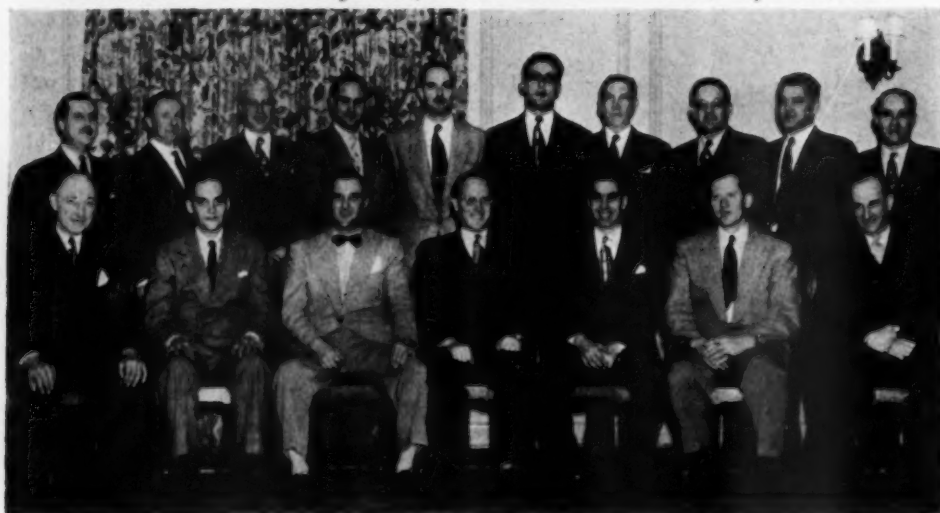
#### Registration and Information

N. D. Scollard, *Chairman*  
S. T. Bodendistel  
H. J. Cassidy

G. R. Cormack  
F. H. Flowers  
R. J. Ketchell  
W. R. Mitchell

C. K. Reeds  
Frank Rushton  
L. W. H. Vercoe  
Frank Walker

### Committee on Local Arrangements, AVMA Toronto Convention, July 20-23, 1953



Front row (left to right)—Drs. J. E. Mumford, C. L. McGilvray, Harold Worton, E. Rendle Bowness, V. C. R. Walker, Alan Secord, H. S. MacDonald.

Back row (left to right)—Drs. A. F. Bain, N. D. Scollard, J. G. Hardenbergh, J. J. Richardson, C. A. V. Barker, Mr. Coleman, Drs. D. J. McClellan, G. H. Collacutt, J. G. MacKay, and J. H. Ballantyne. Drs. J. N. Stratas and J. E. Leeson were not present when the picture was taken.

Exhibits

J. N. Stratas, *Chairman*  
J. A. T. Behan  
W. L. Burch  
J. A. Campbell  
James A. Hutchison  
A. L. Kassirer  
D. C. McMaster  
Neal G. Mendelson  
C. G. Mitges  
Wm. Stratas  
Douglas Treleven  
E. H. Webster

Meeting Rooms and Equipment

J. H. Ballantyne, *Chairman*  
A. H. Calverly  
B. J. Calverly  
T. Gellatly  
R. E. Lawrence  
H. J. Neely  
J. N. Perry

Entertainment

C. L. McGilvray, *Co-Chairman*  
Alan Secord, *Co-Chairman*  
James Archibald  
J. H. Black  
R. W. Ford  
T. W. Hawke  
H. M. Le Gard  
Wm. P. Martin  
J. E. Mumford  
H. V. Skelding  
I. R. Sparling  
Peter Wang  
Edith Williams  
Cicely Wilson

Reception and Hospitality

J. E. Mumford, *Chairman*  
H. S. MacDonald, *Co-Chairman*  
G. F. Barton  
W. G. Bentham  
A. Roy Campbell  
J. A. Campbell  
H. A. Carruthers  
J. A. Charlton  
T. Childs  
L. P. E. Choquette  
J. R. Cunningham  
Joseph Dufresne  
W. J. R. Fowler  
L. A. Gendreau  
Orlan Hall  
T. Lloyd Jones  
T. V. Johnston  
J. Franklin Lavery  
J. Roy Lockhart  
R. S. MacDonald  
R. J. McClenaghan

C. W. McIntosh  
Wm. Moynihan  
K. H. Robson  
Alfred Savage  
F. W. Schofield  
L. C. Swan  
Paul Villeneuve  
Ross Walton

Hotels and Housing

J. E. Leeson, *Chairman*  
C. F. Comfort  
R. C. Croucher  
Audrey Fyvie  
G. P. Mullen  
W. E. Nicholls  
R. J. Pinkney  
P. Priestly  
G. D. Stirk  
L. C. Swan

Garages, Parking, and Airports

G. H. Collacutt, *Chairman*  
G. H. Jones  
C. E. Morgan  
A. P. Morris  
J. N. See  
T. H. Spence  
E. A. Willick

Publicity

J. G. MacKay, *Chairman*  
K. C. Campbell  
Wm. Cresswell  
W. W. Forsythe  
J. A. Henderson  
D. C. McKay  
W. A. Moynihan  
W. C. Reid  
E. M. Trenouth  
J. S. Webster  
R. C. Williams

Television

C. A. V. Barker, *Chairman*  
G. K. Boyce  
Kenneth C. Campbell  
Donald R. Cherry  
James B. Clapp  
Karl A. J. Hartwick  
Carman F. Hawkins  
Frederick D. Horney  
Claude Kealey  
William J. Lennox  
A. MacKinnon  
Alan G. McKay  
W. Allan Ripley

Decorations

A. F. Bain, *Chairman*  
J. H. Ballantyne  
Joan Belcher



Dr. T. Lloyd Jones, principal of Ontario Veterinary College, and president of the Ontario Veterinary Association, will give the response to the address of welcome at the Opening Session of the Convention.

Dr. Jones is also a member of the Executive Board from District I (Canada).

Mrs. S. T. Bodendistel  
H. G. Downie  
J. S. Glover  
Mrs. J. E. Leeson  
Mrs. C. L. McGilvray  
C. L. McGilvray  
D. J. McLellan  
B. J. McSherry  
Mrs. R. J. Pinkney  
Mrs. Alan Secord  
Alan Secord  
N. D. Scollard

Alumni Banquets

D. J. McLellan, *Chairman*  
Ronald Gwatkin  
E. F. Johnston  
A. H. Kennedy  
A. A. Kingscote  
H. C. MacDonald  
R. J. McDonald  
J. E. Mumford  
O. C. G. Raymond  
Jean Rumney  
J. D. Schroeder  
A. B. Wickware  
Edith Williams  
R. H. Wright

Golf

J. J. Richardson, *Chairman*  
S. J. Haslett  
F. G. Heslop  
C. K. Mader  
A. K. Morris

## Women's Activities

Mrs. T. W. Hawke, *Chairman*  
 Mrs. S. T. Bodendistel, *Co-Vice Chairman*      Miss Emily Mumford, *Co-Vice Chairman*  
 Mrs. J. A. Henderson, *Secretary*

### Reception and Tea

Mrs. C. L. McGilvray, *Co-Chairman*  
 Mrs. A. C. Secord, *Co-Chairman*  
 Mrs. V. L. Banks  
 Mrs. E. R. Bowness  
 Mrs. W. A. Campbell  
 Mrs. J. C. Dalton  
 Mrs. T. L. Jones  
 Mrs. W. P. Martin  
 Miss E. Mumford  
 Mrs. R. J. Pinkney  
 Mrs. W. J. Rumney  
 Mrs. J. R. Smith  
 Mrs. V. C. R. Walker  
 Mrs. G. L. Weber  
 Mrs. H. Worton

### Luncheon

Mrs. R. J. Pinkney, *Chairman*  
 Mrs. J. E. Leeson, *Co-Chairman*  
 Mrs. K. C. Campbell  
 Mrs. A. P. Christie

Mrs. J. C. Dancey  
 Mrs. H. R. Potter  
 Mrs. W. C. Reid  
 Mrs. J. J. Richardson  
 Mrs. L. W. Vercoe

### Hospitality

Mrs. E. R. Bowness, *Chairman*  
 Mrs. T. L. Jones, *Co-Chairman*  
 Mrs. J. A. Charlton, *Co-Chairman*  
 Mrs. G. K. Boyce  
 Mrs. A. E. Cameron  
 Mrs. R. Gwatkin  
 Mrs. T. W. Hawke  
 Mrs. J. E. Johnson  
 Miss E. Kealey  
 Mrs. J. E. Leeson  
 Mrs. C. L. McGilvray  
 Mrs. R. B. Murray  
 Mrs. W. J. Rumney  
 Mrs. J. D. Schroeder  
 Mrs. A. C. Secord  
 Mrs. J. N. Stratas  
 Mrs. V. C. R. Walker  
 Mrs. H. Worton

### Registration

Mrs. J. A. Henderson, *Chairman*  
 Mrs. L. W. Vercoe, *Co-Chairman*  
 Mrs. C. A. V. Barker  
 Mrs. S. T. Bodendistel  
 Mrs. C. E. Goodwin  
 Mrs. R. J. McDonald  
 Mrs. A. J. McKinnon  
 Mrs. D. J. McLellan  
 Mrs. M. S. Merwin  
 Mrs. W. R. Mitchell  
 Miss E. Mumford  
 Mrs. F. J. Powley

### Teenagers

Mrs. H. M. Le Gard, *Chairman*  
 Mrs. J. R. Lockhart, *Co-Chairman*  
 Mrs. W. E. Burch  
 Mrs. H. J. Cassidy  
 Mrs. J. E. B. Graham  
 Mrs. R. J. Ketchell  
 Mrs. W. J. Lennox  
 Mrs. J. S. Webster  
 Mrs. K. F. Wells  
 Mrs. R. C. Williams

## Committee on Women's Activities, AVMA Toronto Convention, July 20-23, 1953



Front row (left to right)—Mesdames J. A. Henderson, S. Bodendistel, T. W. Hawke, Miss Emily Mumford, Mesdames C. L. McGilvray, and A. C. Secord.

Back row (left to right)—Mesdames E. R. Bowness, J. J. Richardson, R. J. Pinkney, J. E. Leeson, and H. M. Le Gard.

Junior Committee  
Heather Bowness  
Happy Le Gard  
Diane Lockhart  
Jackie See  
Diane Secord

Frances Swan  
Marcia Worton  
Information Committee  
Mrs. J. J. Richardson, *Chairman*  
Mrs. S. T. Bodendistel  
Mrs. G. R. Cormack

Mrs. E. R. Hawke  
Mrs. E. F. Johnston  
Mrs. W. E. Palmer  
Mrs. W. A. Ripley  
Mrs. W. G. Stevenson  
Mrs. J. N. Stratas

### Message from the Chairman of the Committee on Women's Activities

Thirty years have passed since the last American Veterinary Medical Association convention was held in Toronto, and we women of Ontario are proud and happy to have the honor of playing host to the women of the AVMA.

Our committee is planning an interesting and enjoyable entertainment program for the women and teenagers. On Monday afternoon, July 20, a tour through Casa Loma has been arranged. Casa Loma — Toronto's story-book castle — was built by the late Sir Henry Pellatt at a cost of nearly \$5,000,000. Now a showplace and ballroom for charitable purposes, it is a "must" for tourists visiting Toronto. The tour will be followed by a tea and reception in the castle, where you will meet friends whom you have perhaps not seen for a year and, of course, will offer an opportunity to make new friends.

On Tuesday, a luncheon will be held in one of our fine buildings at the Canadian National Exhibition Grounds where each year the largest exhibition in the British Empire is held. After the luncheon, we hope to have an expert speak to us on your favorite china, accompanied by a film.

Wednesday we are purposely not planning for you in order that you may visit our shops, as we know many of you will want to do, which are convenient to all the hotels.

Our chairman of teenagers' events has planned three days packed with entertainment that the teenagers will not want to miss. A get-together

party on Monday followed by tours on Tuesday and Wednesday are already making many of us older ones envious, so do bring the children for a good time too.



Mrs. T. W. Hawke

The women of Ontario extend a warm invitation to you to come to Toronto in July and share with us the experience we have each year of meeting old friends and making new friends, all friends interested in veterinary medicine.

s/MRS. T. W. HAWKE, *General Chairman,  
Committee on Women's Activities.*



Mrs. S. T. Bodendistel (left), Co-Vice Chairman, Women's Activities Committee; Mrs. J. A. Henderson, Secretary; Miss Emily Mumford, Co-Vice Chairman.

## Women's Activities Subcommittee Chairmen

Information

Mrs. J. J. Richardson,  
Chairman

Hospitality

Mrs. E. R. Bowness,  
Chairman

Reception

Mrs. C. L. McGilvray,  
Chairman

Luncheon

Mrs. R. J. Pinkney,  
Chairman

Tea

Mrs. J. E. Leeson,  
Co-Chairman

Teenagers' Events

Mrs. A. C. Secord,  
ChairmanMrs. H. M. Le Gard,  
Chairman

## Teenagers' Program

**Monday, July 20**

2:00 p.m.  
to  
5:00 p.m. Coketail Party—Roof Garden, Royal York Hotel.

**Tuesday, July 21**

2:00 p.m.  
to  
5:00 p.m. Tour, Pictures, and Talk by Mr. Thor Hansen, Canadian artist and director of public relations, British-American Oil Company.

**Wednesday, July 22**

9:15 a.m.  
to  
10:15 a.m. Conducted Tour of the Royal Ontario Museum.  
10:30 a.m.  
to  
12:00 noon Conducted Tour of Casa Loma.  
12:30 a.m.  
to  
3:00 p.m. Luncheon and Beach Party—Sunnyside Beach.

## Women's Program

### Saturday, July 18

7:00 p.m. Budget Committee, Women's Auxiliary — *President's Room.*

### Sunday, July 19

9:30 a.m. Meeting of Executive Board of Women's Auxiliary — *President's Room.*

12:30 p.m. Registration Opens — *Royal York Hotel.*

### Monday, July 20

8:30 a.m. Registration — *Royal York Hotel.*

8:30 a.m. Visit Commercial and Educational Exhibits — *Royal York Hotel.*

9:00 a.m. Attend Opening Session of the AVMA — *Royal York Hotel.*

2:45 p.m.

to

5:00 p.m. Women's Tea, Reception, and Tour of Castle — *Casa Loma.*

8:00 p.m. Baseball Game.

### Tuesday, July 21

9:30 a.m. House of Representatives, Women's Auxiliary (all interested women are invited) — *Library, Royal York Hotel.*

1:00 p.m. Annual Luncheon of Women's Auxiliary — *Canadian National Exhibition Grounds.*

### Wednesday, July 22

9:00 a.m. Annual Meeting of Women's Auxiliary — *Tudor Room, Royal York Hotel.*

1:00 p.m. This afternoon is open for individual choices.

2:00 p.m. Meeting of Presidents and Secretaries of State Auxiliaries (all interested women are invited) — *Library, Royal York Hotel.*

6:30 p.m. Alumni Dinners. See Bulletin Board.

9:00 p.m. President's Reception and Dance — *Palace Pier.*

### Thursday, July 23

8:30 a.m. Closing Meeting of Executive Board of Women's Auxiliary — *President's Room.*

12:15 p.m. Closing Session of the AVMA Ninetieth Annual Meeting — *Concert Hall, Royal York Hotel.*

(Installation of AVMA officers and Women's Auxiliary officers.)

### Peace Bridge, Buffalo

—Ontario Department, Travel and Publicity



### Message from the President of the Women's Auxiliary

The Women's Auxiliary to the AVMA will be in session during the Nineteenth Annual Meeting of the AVMA in Toronto, July 20-23, 1953.



Mrs. H. S. MacDonald

We extend a cordial invitation to the wives of all veterinarians and veterinary students to attend the many interesting functions planned for the women attending the convention.

We ask you to keep in mind the business sessions of the Auxiliary — the house of representa-

tives meeting, the annual business meeting, and the presidents' and secretaries' meeting. All these are of general interest to our members, and all are open to interested women.

The installation of our Auxiliary officers will be held jointly with the AVMA on Thursday, July 23. This is an honor which we appreciate, and we hope that all the women attending the convention will be present at this ceremony.

As this is the first AVMA convention to be held in Canada in many years, the women's committees, headed by Mrs. T. W. Hawke, have planned the women's activities with this in mind, and promise a program that all will enjoy, with true Canadian flavor and warm Canadian hospitality.

We look forward to seeing our friends from all over North America in Toronto in July.

s/(Mrs. H. S.) Hazel MacDonald, *President*.

### Toronto Ideal for Vacation

Because it is situated on the north shore of Lake Ontario, Toronto is an ideal spot for a summer convention. Extremely hot weather is a rarity (average temperature for July over the past ten years, 79 F.), and cool evenings assure restful sleep. So, summer clothes are the order plus a light summer coat for evenings.

Toronto, Canada's marketing center, offers an excellent opportunity to see merchandise from all over the world.

The people are friendly, and they are happiest when entertaining visitors to their city. We feel that in this coronation year no better site than Canada could have been chosen for the AVMA convention.

WOMEN'S ACTIVITIES COMMITTEE

### Women's Auxiliary Officers

President—Mrs. H. S. MacDonald, Toronto, Ont.

President-Elect—Mrs. R. A. Runnells, East Lansing, Mich.

First Vice-President—Mrs. L. R. Richardson, Ravenna, Ohio.

Second Vice-President—Mrs. E. N. Moore, Wooster, Ohio.

Third Vice-President—Mrs. A. E. Coombs, Skowhegan, Maine.

Secretary—Mrs. C. M. Rodgers, Blandinsville, Ill.

Treasurer—Mrs. C. C. Rife, Atlanta, Ga.

Chairman, House of Representatives—Mrs. L. H. Moe, Stillwater, Okla.

Recorder, House of Representatives—Mrs. L. G. Cloud, Fort Worth, Texas.

Retiring President—Mrs. C. E. Bild, Miami, Fla.

## AVMA Group Conferences and Meetings of Other Organizations

(Unless otherwise indicated, all meetings will be held  
in the Royal York Hotel)

### Saturday, July 18

- 12:30 p.m. Council meeting of the Canadian Veterinary Medical Association — *Room 1.*

### Sunday, July 19

- 9:00 a.m. Council meeting of the Canadian Veterinary Medical Association — *Room 1.*

- 9:00 a.m. Pre-Convention Conference of Constituent Association Secretaries, Editors, Ethics and Public Relations Workers — *Room 10.*  
Title of Conference — "Our Total Public Relations Responsibilities."

- 12:30 p.m. Pre-Convention Conference Luncheon — *Room 9.*

#### Workshops — Pre-Convention Conference

- 2:00 p.m. Constituent Association Secretaries — *Room 8.*  
2:00 p.m. Ethics Workers — *Room 6.*  
2:00 p.m. Public Relations Workers — *Room 7.*  
2:00 p.m. Editors — *Room 2.*

- 1:30 p.m. Association of Deans of American Colleges of Veterinary Medicine — *Room 5.*  
2:00 p.m. Veterinary Care of Laboratory Animals — *Room 3.*  
5:00 p.m. Phi Zeta Fraternity — *Room 4.*  
5:30 p.m. Meeting of Delegates of the Student Chapters and Auxiliaries — *Room 9.*  
6:30 p.m. American Veterinary Exhibitors Association, Inc. — *Room 10.*  
8:00 p.m. National Board of Veterinary Medical Examiners — *Room 3.*

### Monday, July 20

- 12:00 noon American Animal Hospital Association — *Library.*  
4:30 p.m. Conference of Veterinary Radiologists — *Room 8.*  
5:00 p.m. American College of Veterinary Pathologists — *Room 6.*

### Tuesday, July 21

- 12:30 p.m. American Association of Veterinary Anatomists — *Room 6.*  
4:00 p.m. Conference of Public Health Veterinarians — *Room 2.*  
4:30 p.m. Conference of Extension Veterinarians — *Room 5.*  
4:30 p.m. Women's Veterinary Medical Association — *Room 1-2.*  
4:30 p.m. Conference of Veterinary Physiologists and Pharmacologists — *Room 6.*  
4:45 p.m. Conference of Veterinary Parasitologists — *Room 3.*  
7:00 p.m. National Association of Federal Veterinarians — *Room 7.*  
7:00 p.m. Conference of Zoo Veterinarians — *York Room.*  
7:30 p.m. Conference of Editors — *Room 8.*  
7:30 p.m. Business Meeting of the Canadian Veterinary Medical Association — *Room 9.*  
7:30 p.m. Alpha Psi Fraternity — *Ball Room.*  
8:00 p.m. American Board of Veterinary Public Health — *Room 3.*  
8:00 p.m. National Assembly of Chief Livestock Sanitary Officials — *Room 6.*  
8:00 p.m. Conference of Veterinary Examining Boards — *Room 8.*

### Public Relations Theme of Third Annual Preconvention Conference

Dr. F. B. Young of Iowa, chairman, and Dr. B. F. Pomeroy, of Minnesota, secretary, of the Conference of state and provincial association secretaries have completed arrangements for the preconvention conference on "Our Total Public Relations Responsibility" to be held in Room 10 of the Royal York Hotel in Toronto, Ont., on Sunday, July 19, 1953. The secretaries have invited the chairmen and members of the committees on public relations and ethics of state and provincial associations, and the editors of veterinary medical publications to participate in the conference.

The morning program will consist of a keynote speech, a preview of television kinescopes produced at Michigan State College, a discussion of ethics by a medical representative, and a talk on inter- and intraprofessional organization.

The luncheon speaker will be Mr. Roy Battles, assistant of the Master of the National Grange, and formerly farm radio director of W.L.W. in Cincinnati, Ohio.

The afternoon will be devoted to workshop discussions of the various groups.

All veterinarians are invited to attend. Members of ethics and public relations committees and editors are urged to be present.

### New Films to Be Shown at the AVMA Meeting

Motion pictures showing the symptoms and lesions of exotic diseases such as heartwater, Nagana, East Coast fever, foot-and-mouth disease, and diseases only recently seen in the United States, such as scrapie and bluetongue, will be shown continuously on Tuesday and Wednesday mornings, July 21 and 22, at the AVMA annual meeting in Toronto. These films will be shown in Room 10 at the Royal York Hotel.

They will be made available by the Federal Civil Defense Administration, and have been produced in cooperation with the U.S. Department of Agriculture. The exact schedule for the showing of these films will be published in the official convention program.

Because of the constant threat of these exotic diseases to the livestock of the United States, it behooves every veterinarian to be familiar with them. No one can tell when any of these diseases will appear. By being alert to the indications of these conditions, veterinarians are in a position to protect the livestock of the nation, and to prevent embarrassing lapses in veterinary medical service.

### General Convention Entertainment

Monday, July 20, 1:30 p.m. — AVMA Golf Tournament — Scarborough Golf and Country Club.

Monday, July 20, 8:00 p.m. — Baseball Game.

Wednesday, July 22, 6:30 p.m. — Alumni Dinners.

Wednesday, July 22, 9:00 p.m. — President's Reception and Dance — Palace Pier.

### Fraternity Lounge

The Omega Tau Sigma fraternity will have a lounge available to fraternity members, for the duration of the convention, as a meeting place and social room.

### Veterinary Bacteriologists' Meeting

All those interested in the teaching of veterinary bacteriology are invited to attend a meeting at Michigan State College, School of Veterinary Medicine, East Lansing,

on July 17, 1953. This date was selected so that those interested may attend this meeting on the way to the AVMA convention in Toronto. Demonstrations and discussions of methods of teaching bacteriology and virology, with an opportunity for informal discussion, will be included in the one-day program.

For additional information, contact Dr. C. H. Cunningham, Michigan State College, East Lansing.—Robert Getty, D.V.M.

All sessions will be on Eastern Daylight Saving Time — one hour faster than Standard Time.

**Opening Session**  
**Concert Hall — Royal York Hotel**  
**Monday, July 20, 9:00 a.m.**

*Music.*

**9:30 a.m.**

*Call to Order.*—President Willard L. Boyd.

*Invocation.*—The Reverend Cecil Swanson, Rector of St. Paul's, Toronto.

*The National Anthems*

God Save the Queen

The Star Spangled Banner

*Address of Welcome.*—The Rt. Hon. Louis St. Laurent, Prime Minister of Canada.

*Response.*—Dr. T. Lloyd Jones, President, Ontario Veterinary Association.

*Greetings from Women's Auxiliary.*—Mrs. H. S. MacDonald, President, Toronto, Ont.

*Address.*—Dr. Willard L. Boyd, President.

*Announcements.*—Dr. E. R. Bowness, General Chairman, Committee on Local Arrangements.

*Presentation of Awards*

By Dr. George W. Mather, Chairman, Special Committee on Humane Act Award:

1953 Humane Act Award.

By Dr. Willard L. Boyd, Chairman *ex officio*, Committee on Awards: Twelfth International Veterinary Congress Prize.

Borden Award for 1953.

AVMA Award.

By Dr. Edwin Laitinen, Chairman, Executive Board:

Gold Key to Incoming President.

Service Scroll to Retiring President.

*Nomination of Officers\**

\*If a ballot election is required (due to having more than one nomination for the respective offices), polls will be set up in the executive secretary's office in the Royal York Hotel on Tuesday, July 21.

Officers to be elected at Toronto are: president-elect, five vice-presidents, and treasurer. There will be joint installation ceremonies for AVMA and Auxiliary officers at the Closing Session on Thursday, July 23.

This covered bridge in West Montrose, 11 miles northwest of Guelph, is one of the few remaining in Ontario.

—Ontario Department, Travel and Publicity





## Section on General Practice

Monday, July 20, 1:15 p.m.

Concert Hall  
Royal York Hotel

## First Session

J. D. Beck, Philadelphia, Pa., Chairman

- 1:15 (1) Motion Picture—Teschin Disease.  
*Federal Civil Defense Administration, Washington, D. C.*  
Opening Remarks by Chairman.  
Report of Secretary.
- 1:30 (2) Television—Clinical Briefs.  
Demonstration of Difference Between Plain and Threaded Pins.  
*J. E. Greene, Auburn, Ala.*  
Anesthesia by Pentothal-Ether Combination.  
*G. J. Lawhon, Jr., Harrisonburg, Va.*
- 1:40 (3) Diseases of Sheep.  
*R. A. Forsyth, Batavia, N. Y.*  
General Discussion.
- 2:10 (4) Television—Bovine Midline Cesarean Section.  
*J. W. Sexton and E. C. Ritter, Sumner, Iowa.*  
Narrator—*H. L. Marsh, Princeton, Ill.*
- 2:20 (5) Antibiotic Therapy in Large Animals.  
*S. J. Roberts, Ithaca, N. Y.*  
Antibiotic Therapy in Small Animals.  
*W. C. Reid, Fort Erie, Ont.*
- 2:50 (6) Television—Universal Horn Saw Demonstration (An Electric Saw for Cutting Horns).  
*J. R. Wynkoop, Canal Winchester, Ohio.*
- 3:00 (7) New Developments in the Control and Treatment of Parasites:  
In Large Animals.  
*W. S. Bailey, Auburn, Ala.*  
In Small Animals.  
*G. L. Graham, Philadelphia, Pa.*  
General Discussion.
- 3:35 (8) Television—Intestinal Anastomosis of the Small Bowel.  
*E. W. Causey, Athens, Ga.*  
Narrator—*F. T. Candlin, Denver, Colo.*
- 3:45 (9) Enteric Diseases of Swine:  
New Developments.  
*L. M. Hutchings and L. P. Doyle, Lafayette, Ind.*  
From a Practitioner's Viewpoint.  
*L. C. Swan, St. Catharines, Ont.*  
Discussion.  
*T. L. Jones, Guelph, Ont.*
- 4:25 (10) Television—Bovine Antisucking Operation.  
*E. D. Wright, Jacksonville, Fla.*  
Adjournment at 4:30 p.m.

## Section on General Practice

Tuesday, July 21, 8:45 a.m.

*Concert Hall  
Royal York Hotel*

### Second Session



T. L. Steenerson, Wilkinson, Ind.,  
Secretary

- 8:45 (11) Motion Picture—Heartwater Disease.  
*Federal Civil Defense Administration, Washington, D. C.*
- 9:00 (12) Shipping Fever in Feeder Cattle.  
*J. L. Palotay, Greeley, Colo.*  
Discussion.  
*E. N. Anderson, Norwood, Minn.*  
General Discussion.
- 9:35 (13) Television—Use of a Magnet to Locate and Remove Foreign  
Bodies from the Reticulum.  
*W. P. Bond, Bloomsburg, Pa.*
- 9:45 (14) Some Newer Aspects of Rumenology.  
*C. F. Huffman, East Lansing, Mich.*  
General Discussion.  
Nominations for Section Officers.
- 10:15 (15) A Practitioner's Views on Ketosis.  
*W. J. O'Rourke, Columbus, Wis.*  
General Discussion.
- 10:40 (16) Television—Routine Horse Handling.  
*J. E. Burch, Lawrence, Mass., and W. O. Reed, Elmont, L. I.,  
N. Y.*
- 10:45 (17) Swine Nutrition.  
*C. K. Whitehair and E. F. Reber, Urbana, Ill.*  
General Discussion.
- 11:15 (18) Television—Bloodless Tonsillectomy.  
*H. M. Bratt, Sr., Terre Haute, Ind., and J. H. Yarborough,  
Miami, Fla.*
- 11:20 (19) Leptospirosis in Domestic Animals.  
*L. C. Ferguson and E. H. Bohl, Columbus, Ohio.*  
Leptospirosis as Seen in Small Animal Practice.  
*K. W. Smith, Sioux City, Iowa.*  
Leptospirosis in Cattle.  
*J. V. McCabon, Downingtown, Pa.*  
General Discussion.  
Adjournment at 12:00 noon.

(Continued on p. 454)



J. A. Baker, Ithaca, N. Y., Chairman

## Section on Research

Monday, July 20, 1:30 p.m.

Room 9, Main Mezzanine  
Royal York Hotel

### First Session

- 1:30 (25) Gestation and Fetal Development in Riboflavin-Deficient Rats.  
*Florence A. Perry and J. P. W. Gilman, Guelph, Ont.*
- 1:50 (26) The Experimental Transmission of the Distemper Virus Among Ferrets and Mink.  
*J. R. Gorham and C. A. Brandly, Madison, Wis.*
- 2:10 (27) The Pathogenicity of the Coccidian Parasite, *Eimeria Ninakobli-Yakimovi* (Yakimov and Rastegaeva, 1930), in Domestic Sheep.  
*J. C. Lotze, Beltsville, Md.*
- 2:30 (28) The Experimental Production of Malformations and Other Abnormalities in Fetal Pigs by Means of Attenuated Hog Cholera Virus.  
*J. H. Sautter, St. Paul, Minn.; G. A. Young, Austin, Minn.; A. J. Luedke and R. L. Kitchell, St. Paul, Minn.*
- 2:50 (29) The Detection of Estrogenic Substances in Hay and Grains.  
*L. C. Payne, Ames, Iowa.*  
Opening Remarks by Chairman.  
Report of Secretary.
- 3:20 (30) Further Studies in the Pathology and Bacteriology of Infectious Atrophic Rhinitis of Swine.  
*F. W. Schofield and A. Robertson, Guelph, Ont.*
- 3:40 (31) Field Trials and Laboratory Tests with *Listeria* Bacterins.  
*D. F. Eveleth, Alice I. Goldsby, F. M. Bolin, G. C. Holm, and Jenny Turn, Fargo, N. Dak.*
- 4:00 (32) The Effect of Fortifying a Practical Ration with Trace Mineral Elements (Fe, Cu, Co, Mn, and Zn) on the Hematology of Cattle.  
*M. J. Swenson and G. K. L. Underbjerg, Manhattan, Kan.*
- 4:20 (33) Antigenic Studies Using Ammonium Sulfate. III. The Relative Antigenic Balance of *Salmonella Pullorum* Cultures Isolated from the Progeny of Variant-Infected Chickens.  
*I. E. Williams, Washington, D. C.*
- Adjournment at 4:45 p.m.

## Section on Research

Tuesday, July 21, 9:00 a.m.

Room 9, Main Mezzanine  
Royal York Hotel

### Second Session



H. W. Dunne, Frederick, Md., Secretary

- 9:00 (34) An Approach to Eradication of Swine Diseases (Illustrated).  
*G. A. Young, N. R. Underdahl, and R. W. Hinz, Austin, Minn.*
- 9:20 (35) The Demonstration of Vesicular Virus Antibodies by Complement-Fixation Methods.  
*P. Boulanger and C. E. Rice, Hull, Que.*
- 9:40 (36) A Disease of Swine and Cattle Caused by Ingestion of Molded Corn.  
*W. L. Sippel, J. E. Burnside, and M. B. Atwood, Tifton, Ga.*
- 10:00 (37) A Comparison of Serological Diagnostic Tests for Leptospirosis.  
*C. J. York, Indianapolis, Ind., and R. V. Johnston, Zionsville, Ind.*
- Nominations for Section Officers.
- 10:30 (38) Gut Edema or Edema Disease of Swine.  
*H. G. Lamont, Belfast, Northern Ireland.*
- 11:00 (39) Problems Encountered in Growth Studies of Venezuelan Equine Encephalomyelitis Virus in Tissue Culture.  
*R. O. Anslow, Carleton Gajdusek, R. H. Yager, and Elizabeth J. Smith, Washington, D. C.*
- 11:20 (40) The Acid-Base Balance of Dairy Cattle in Relation to the Environmental Temperature.  
*H. E. Dale and S. Brody, Columbia, Mo.*
- 11:40 (41) Response of Monkeys and Chimpanzees to Poliomyelitis Virus After Injection with Newcastle Disease Virus.  
*R. L. Reagan, A. L. Brueckner, College Park, Md.; and W. C. Day, Camp Detrick, Md.*

Adjournment at 12:00 noon.

All sessions will be on Eastern Daylight Saving Time — one hour faster than Standard Time.



A. G. Misener, Chicago, Ill., Chairman

## Section on Small Animals

Tuesday, July 21, 1:30 p.m.

*Concert Hall  
Royal York Hotel*

### First Session

- 1:30 (42) Iridencleisis for Relief of Glaucoma (Illustrated).  
*H. E. Jensen, Cleveland, Ohio.*  
Opening Remarks by Chairman.  
Report of Secretary.
- 2:00 (43) The Aging Dog—Our Responsibility and Opportunity.  
*C. E. DeCamp, Indianapolis, Ind.*
- 2:25 (44) Television—Extracapsular Cataract Extraction by Suction.  
*W. G. Magrane, Mishawaka, Ind.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*
- 2:40 (45) The Use of Radon in Canine Malignancy.  
*D. S. Darlington, Edgewood, Md.*
- 3:05 (46) Television—Blood Collection and Transfusion.  
*J. R. Dinsmore, Glenview, Ill., and R. E. Storm, Evanston, Ill.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*
- 3:15 (47) Caged Birds as a Part of Veterinary Practice.  
*C. C. Wagner, H. B. Roberts, and W. E. Wendt, Lakewood, Ohio.*
- 3:35 (48) Symposium on Radiology:  
*Moderator—R. B. McClelland, Buffalo, N. Y.*  
Radiographic Pathology of the Canine Coxofemoral Joints.  
*W. C. Banks, College Station, Texas.*  
Safety Factors as Pertaining to Use of X-Ray in the Field.  
  
Treatment of Chronic Corneal Lesions with Beta Radiation.  
*F. T. Candlin, Denver, Colo.*  
X-Ray Therapy.  
*W. C. Glenney, Ardmore, Pa.*
- 4:20 (49) Television—Perineal Herniorrhaphy.  
*M. W. Allam and Eric Pallister, Philadelphia, Pa.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*

Adjournment at 4:30 p.m.

## Section on Small Animals

Wednesday, July 22, 9:00 a.m.

Concert Hall  
Royal York Hotel

### Second Session



H. E. Jensen, Cleveland, Ohio,  
Secretary

- 9:00 (50) Motion Picture—Vitalium Bone-Plating in Dogs.
- 9:15 (51) An Approach to Surgery in the Older Dog.  
*C. L. Blakely, Boston, Mass.*
- 9:40 (52) Television—Thoracic Surgery Equipment:  
Burns Valve Equipment.  
*Alan Secord, Toronto, Ont.*  
Knowles Equipment.  
*J. O. Knowles, Miami, Fla.*  
E. & J. Resuscitator Equipment.  
*T. E. Willis, Lansdowne, Pa.*  
Rand Type Equipment.  
*H. E. Jensen, Cleveland, Ohio.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*
- 9:55 (53) Diseases of the Chinchilla.  
*H. W. Boothe, Chicago, Ill.*
- 10:15 (54) Television—Demonstration of the Use of Curare in Dogs.  
*Deets Pickett, Kansas City, Mo.*  
Epidural Anesthesia.  
*J. K. Bone and J. G. Peck, Chicago, Ill.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*
- 10:30 (55) Persistent Otitis in the Dog.  
*N. L. McBride, Pasadena, Calif.*
- 10:50 (56) Television—Cortical Onlay and Cancellous Bone Grafting in the Dog  
*James Archibald and N. M. Brown, Guelph, Ont.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*
- 11:05 (57) The Use of the Determination of the Urea Content of the Blood in the Diagnosis of Leptospirosis in the Dog.  
*C. E. Bild, Miami, Fla.*
- 11:20 (58) Television—De-scenting of the Skunk.  
*Alan Secord, Toronto, Ont.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*
- 11:25 (59) Motion Picture—Surgical Handicraft.  
*J. E. Greene, Auburn, Ala.*
- 11:45 (60) Television—Operation for Repair of Recurrent Hip Luxations and/or Femoral Neck Fractures.  
*J. O. Knowles and C. E. Bild, Miami, Fla.*  
Narrator—*F. J. Kingma, Columbus, Ohio.*  
Adjournment at 12:00 noon.

(Continued on p. 454)



H. Van Roekel, Amherst, Mass.,  
Chairman

### Section on Poultry

Tuesday, July 21, 1:30 p.m.

Room 9, Main Mezzanine  
Royal York Hotel

#### First Session

- 1:30 (68) Opening Remarks by Chairman.  
Report of Secretary.
- 1:40 (69) Wild Birds as Possible Spreaders of Newcastle Disease.  
*D. P. Gustafson and H. E. Moses, Lafayette, Ind.*
- 2:00 (70) A Simplified Procedure for the *in Vitro* Propagation of Newcastle Disease.  
*G. R. Scott, R. P. Hanson, and C. A. Brandly, Madison, Wis.*
- 2:20 (71) Degeneration in the Central Nervous System of Chickens Vaccinated and Infected with Newcastle Disease Virus.  
*J. Auer, Ottawa, Ont.*
- 2:40 (72) Avian Respiration.  
*H. G. Downie, Guelph, Ont.*
- 3:00 (73) Etiology of Chronic Respiratory Disease.  
*H. Van Roekel and Olga M. Olesink, Amherst, Mass.*
- 3:20 (74) Pathology and Serology of Air Sac Infection.  
*E. L. Jungherr, R. E. Luginbuhl, and R. E. Jacobs, Storrs, Conn.*
- 3:40 (75) A Study of Complement-Fixation Methods as Related to the Demonstration of Antibodies in Birds.  
*P. Boulanger and C. E. Rice, Hull, Que.*
- 4:00 (76) Bluecomb Disease of Turkeys.  
*B. S. Pomeroy and J. M. Sieburt, St. Paul, Minn.*
- 4:20 (77) The Comparative Coccidiostatic Activity of Some Drugs Against Turkey Coccidia.  
*C. I. Boyer, Jr., and Jesse Brown, Ithaca, N. Y.*

Adjournment at 4:40 p.m.

## Section on Poultry

Wednesday, July 22, 9:00 a.m.

Room 9, Main Mezzanine  
Royal York Hotel

### Second Session



Ronald Gwatkin, Hull, Que., Secretary

- 9:00 (78) Motion Picture—Techniques for the Cultivation of Virus in Chicken Embryos (Loaned by Department of Veterinary Science, University of Wisconsin).
- Nominations for Section Officers.
- 9:20 (79) The Effect of Different Routes of Inoculation on the Adaptation of Infectious Bronchitis Virus to Embryonating Chicken Eggs.  
*C. H. Cunningham, East Lansing, Mich., and Mary H. Jones, Ann Arbor, Mich.*
- 9:40 (80) The Extent and Control of Infectious Bronchitis in Canada.  
*J. F. Crawley, Toronto, Ont.*
- 10:00 (81) A Preliminary Report on the Efficiency of Three Newcastle Disease Vaccines.  
*J. R. E. Taylor, Guelph, Ont.*
- 10:20 (82) Results of Field Tests on Spraying a Commercially Prepared Newcastle Disease Vaccine.  
*S. B. Hitchner and G. Reising, Amherst, Mass.*
- 10:40 (83) Salmonella Infections of Poultry in Alberta.  
*E. E. Ballantyne, Edmonton, Alta.*
- 11:00 (84) Disease Problems Confronting the Duck Industry.  
*E. Dougherty III, Eastport, L. I., N. Y.*
- 11:20 (85) Problems Arising from the Use of Antibiotics in Poultry Rations.  
*J. D. Nadeau, St.-Hyacinthe, Que.*
- 11:40 (86) The Use of a Killed Erysipelas Bacterin for the Control of *Erysipelothrix Rhusiopathiae* in Turkeys.  
*E. M. Dickinson, Corvallis, Ore.; A. C. Jerstad, Puyallup, Wash.; H. E. Adler, Pullman, Wash.; Murray Cooper, Pearl River, N. Y.; W. E. Babcock, Corvallis, Ore.; E. E. Johns, Puyallup, Wash.; and C. A. Bottorff, Pearl River, N. Y.*

Adjournment at 12:00 noon.



G. R. Moore, East Lansing, Mich.,  
Chairman

## Section on Surgery and Obstetrics

Wednesday, July 22, 1:30 p.m.

Concert Hall  
Royal York Hotel

### First Session

- 1:30 (87) Dehorning of Cattle (Illustrated).  
*L. A. Gendreau, Sherbrooke, Que.*
- 1:55 (88) Teat Surgery.  
*M. L. Weldy, Wakarusa, Ind.*  
Opening Remarks by Chairman.  
Report of Secretary.
- 2:20 (89) Television (Part I)—Pipetting Unit for Local Anesthesia in the Legs of the Horse.  
*W. F. Riley, Jr., East Lansing, Mich.*  
Narrator—*C. F. Clark, East Lansing, Mich.*
- 2:30 (90) Thoroughbreds on the Racetrack.  
*E. N. Anderson, Norwood, Man.*
- 2:55 (91) Television (Part II)—Point Firing.  
*W. F. Riley, Jr., East Lansing, Mich.*  
Narrator—*C. F. Clark, East Lansing, Mich.*
- 3:05 (92) Abomasotomy in the Calf.  
*F. H. Fox, Ithaca, N. Y.*
- 3:30 (93) Surgical Treatment of the Fractured Splint Bone.  
*E. F. Pallister, Philadelphia, Pa.*
- 3:45 (94) Modern Trends in Large Animal Anesthesia.  
*F. J. Milne, Fort Collins, Colo.*
- 4:10 (95) Television—Abomasotomy in the Calf.  
*F. H. Fox, Ithaca, N. Y.*  
Narrator—*C. F. Clark, East Lansing, Mich.*
- Adjournment at 4:30 p.m.

## Section on Surgery and Obstetrics

Thursday, July 23, 9:00 a.m.

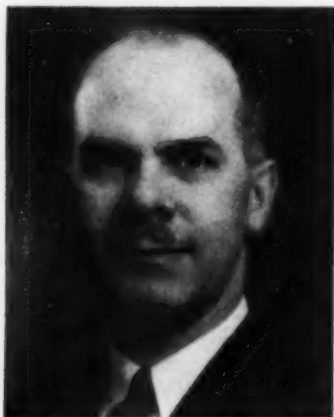
Concert Hall  
Royal York Hotel

### Second Session



J. A. Henderson, Guelph, Ont.,  
Secretary

- 9:00 (96) Motion Picture—Surgical Removal of a Bovine Uterine Tumor.  
*C. A. V. Barker, Guelph, Ont.*
- 9:10 (97) Symposium on Bovine Infertility:  
Moderator—*A. Savage, Winnipeg, Man.*  
Congenital Conditions Interfering with Reproduction in Cattle.  
*W. J. Gibbons, Auburn, Ala.*  
The Diagnosis of Bovine Genital Infections.  
*D. E. Bartlett, Chicago, Ill.*  
Therapy in Bovine Infertility.  
*F. D. Knippling, Milaca, Minn.*
- Nominations for Section Officers.
- 10:10 (98) Television (Part I)—The Internal Pudendal (Pudic) Nerve Block for Anesthesia of the Penis and Relaxation of the Retractor Penis Muscle.  
*L. L. Larson, St. Paul, Minn., and D. E. Bartlett, Chicago, Ill.*  
Narrator—*R. L. Kitchell, St. Paul, Minn.*
- 10:15 (99) Sterility in Mares.  
*D. L. Proctor, Jr., Lexington, Ky.*
- 10:40 (100) Low Temperature Preservation of Bull Semen.  
*J. W. Macpherson and J. A. Henderson, Guelph, Ont.*
- 11:05 (101) Television (Part II)—The Treatment of Bulls for Trichomoniasis.  
*L. L. Larson, St. Paul, Minn., and D. E. Bartlett, Chicago, Ill.*  
Narrator—*R. L. Kitchell, St. Paul, Minn.*
- 11:15 (102) Studies on Retained Placenta in the Cow.  
*L. E. McDonald, Urbana, Ill.*
- 11:40 (103) Television—Surital-Curare Anesthesia in Canine Cesarean Section.  
*R. G. Schirmer and R. E. Brown, East Lansing, Mich.*  
Narrator—*C. F. Clark, East Lansing, Mich.*
- Adjournment at 12:00 noon.  
(Please stay for the Closing Session which follows)



G. A. Edge, Toronto, Ont., Chairman

## Section on Public Health

Wednesday, July 22, 1:30 p.m.

*Room 9, Main Mezzanine  
Royal York Hotel*

### First Session

- 1:30 (104) Motion Picture—Epidemiology of Brucellosis.  
Opening Remarks by Chairman.  
Report of Secretary.
- 2:00 (105) The Relation of Veterinary Mycology to Public Health.  
*Libero Ajello, Chamblee, Ga.*
- 2:30 (106) Newcastle Disease in Relation to Public Health.  
*C. A. Mitchell, Hull, Que.*
- 3:00 (107) Public Health in the Veterinary Curriculum.  
*C. F. Clark, East Lansing, Mich.*
- 3:30 (108) Food Quality Control in the Veterinary Curriculum.  
*W. E. Jennings, Fort Sam Houston, Texas.*
- 4:00 (109) Poultry Sanitation and Inspection Standards.  
*James Lieberman, Washington, D. C.*
- 4:30 (110) Present Status of Canine Rabies Immunization.  
*E. S. Tierkel, R. E. Kissling, and Martha Eidson, Montgomery, Ala.; and Karl Habel, Bethesda, Md.*
- Adjournment at 5:00 p.m.

All sessions will be on Eastern Daylight Saving Time — one hour  
faster than Standard Time.

## Section on Public Health

Thursday, July 23, 9:00 a.m.

Room 9, Main Mezzanine  
Royal York Hotel

### Second Session



R. F. Willson, Detroit, Mich., Secretary

- 9:00 (111) New Milk Sanitation Standards.  
*R. J. Helvig, Washington, D. C.*
- 9:30 (112) The Air Force Veterinary Program.  
*W. O. Kester, Washington, D. C.*
- 10:00 (113) Control of Trichinosis by Sterilizing Garbage Fed to Swine.  
*T. Childs, Ottawa, Ont.*
- Nominations for Section Officers.
- 10:30 (114) Symposium on Veterinary Public Health in the States:  
The Michigan Program.  
*W. M. Decker, Lansing, Mich.*  
The South Carolina Program.  
*F. M. Lee, Columbia, S. Car.*  
The Georgia Program.  
*J. H. Steele, Atlanta, Ga.*  
The Colorado Program.  
*M. D. Baum, Denver, Colo.*
- 11:00 (115) Veterinary Public Health Education in Canada.  
*G. A. Edge, Toronto, Ont.*
- 11:30 (116) Diseases Seen in Nigeria which Threaten North American Livestock.  
*D. H. Hill, Ibadan, Nigeria.*
- Adjournment at 12:00 noon.

(Those in attendance are requested to go to the Concert Hall for the Closing Session and Installation of Officers, which follows adjournment of this Section.)

## Closing Session

Concert Hall — Royal York Hotel

Thursday, July 23, 12:15 p.m.

Installation of AVMA Officers and Women's Auxiliary Officers.  
Adjournment.

(Continued from p. 447)

## Section on Small Animals

Wednesday, July 22, 1:30 p.m.

## Third Session

Roof Garden, Royal York Hotel

- 1:30 (61) Motion Picture—Cesarean Section in the Cat.
- 1:45 (62) Symposium on Canine Distemper:  
     The Differential Diagnosis of Canine Distemper.  
     *G. W. Mather, St. Paul, Minn.*  
     A Ten Minute Discussion on the Treatment of Distemper.  
     *W. L. Weitz, Buffalo, N. Y.*  
     Immunization Theories and Methods for Canine Distemper.  
     *L. C. Moss, Fort Collins, Colo.*
- 2:15 (63) Canine Atrophic Pancreatitis (Illustrated).  
     *James Archibald, Guelph, Ont.*  
     Nominations for Section Officers.
- 2:35 (64) Utilization of Veterinary Skills in Medical Civil Defense.  
     *M. L. Lichter, Melvindale, Mich.*
- 2:55 (65) Symposium on Hospital Management:  
     Moderator—*J. B. Engle, Summit, N.J.*  
     Employer and Employee Relationship in Small Animal Practice.  
     *O. Norling-Christensen, Wilmette, Ill.*  
     Establishing and Collecting Fees.  
     *C. L. McGilvray, Toronto, Ont.*  
     Client Relations.  
     *J. R. Currey, Washington, D. C.*
- 3:30 (66) Feline Cystitis and Urethritis.  
     *K. W. Smith, Sioux City, Iowa.*
- 3:55 (67) Symposium on Skin Diseases:  
     Moderator—*Alan Secord, Toronto, Ont.*  
     Demodectic Mange.  
     *A. A. Kingscote, Guelph, Ont.*  
     Dermatomycoses of Dogs.  
     *R. E. Witter, Urbana, Ill.*  
     Noninfectious Dermatoses.  
     *E. S. Pickup, Union City, Pa.*  
     Adjournment at 4:30 p.m.

(Continued from p. 443)

## Section on General Practice

Tuesday, July 21, 1:15 p.m.

## Third Session

Roof Garden, Royal York Hotel

- 1:15 (20) Foot-and-Mouth Disease Prevention and Eradication (Illustrated).  
     *K. F. Wells, Ottawa, Ont.*
- 1:45 (21) Treatments for Bovine Mastitis.  
     *A. R. Drury, East Lansing, Mich.*  
     Discussion.  
     *L. A. Gendreau, Sherbrooke, Que.*
- 2:15 (22) Poultry Practice.  
     *C. L. Nelson, Jewell, Iowa.*  
     General Discussion.
- 2:45 (23) Symposium—Can Hog Cholera Be Eradicated?  
     Experiences in Canada.  
     *Orlan Hall, Ottawa, Ont.*  
     Experiences in the United States.  
     *R. S. Sugg, Auburn, Ala.*  
     Effect of New Vaccines.  
     *J. D. Ray, White Hall, Ill.*  
     A Practitioner's Viewpoint.  
     *L. T. Railsback, Ellsworth, Minn.*  
     General Discussion.
- 4:00 (24) Field Cases of Atrophic Rhinitis (Illustrated).  
     *H. C. Smith, Sioux City, Iowa.*  
     Adjournment at 4:30 p.m.

## The Commercial Exhibits at Toronto

*The commercial exhibits at the Ninetieth Annual AVMA Convention will — as always — be a colorful demonstration of the many products and technical developments which enable veterinarians to keep abreast of the times in their services to clients and patients.*

*Nearly 60 leading companies will occupy 67 booths in the exhibit area which covers over 10,000 square feet of space. This year, several Canadian firms, which are not usually represented at AVMA conventions, are participating.*

*The American Veterinary Exhibitors Association will again sponsor awards as part of its program of improving the exhibits feature and stimulating interest in, and inspection of, the displays. Pieces of fine luggage will be presented to a veterinarian and to a veterinarian's wife whose names are drawn. Details on how to qualify for these prizes will be distributed to registrants.*

### Abbott Laboratories

*Booth 59*

Abbott Laboratories will exhibit Seleen Suspension, a new liquid preparation for treatment in dogs of nonspecific dermatoses of obscure etiology, sometimes called summer eczema, dry eczema, and fungus infections. This preparation greatly assists in removing dead tissue scales which accumulate as a result of these skin conditions. In addition to its efficacy in these conditions and its cleansing action, Seleen will also kill fleas and lice with one application.

### Allied Laboratories, Inc.

Pitman-Moore Company—Division of Allied Laboratories, Inc.

Pitman-Moore Company of Canada—Division of Allied Laboratories, Inc.

*Booths 57 and 58*

The company exhibit will feature Swivax, Virogen, Polycin, Rumella, and other pharmaceutical and biological specialties of highest quality. As an added attraction the televised demonstrations, being sponsored by Allied Laboratories, Inc., in cooperation with Radio Corporation of America, can be viewed from a receiver installed in the booth.

### Ames Co., Inc.

*Booth 62*

Ictotest will be demonstrated at the Ames display. This tablet test for urine-bilirubin is newest of our series of accurate, time-saving aids for diagnosis. Diagnostic Kit, including Acetest for urine-acetone, Bumintest for urine-albumin, Clinitest for urine-sugar, and Hematest for occult blood will be featured.

### Arista Surgical Company

*Booth 45*

Government surplus and regular stock veterinary instruments; chromic, plain, and intestinal sutures; Ferguson angiotribs, intramedullary sets; hemostats and scissors; flesh-colored bandages; syringes, needles, Oster clippers, etc. New price lists available at our Booth 45.

### Armour Veterinary Laboratories

*Booth 12*

Armour Veterinary Laboratories' display will place special emphasis upon Adrenomone (veterinary adaptation of ACTH), specific for primary ketosis in dairy cattle. P.O.P. (Purified Oxytocic Principle) will also be featured for use in dairy cattle, swine, and small animal practice as an aid in management of precipitation of labor, normal parturition (to accelerate the process), dystocia due to uterine inertia, postpartum evacuation of uterine debris.

**Arnold Laboratories***Booth 7*

You are cordially invited to visit our booth and inspect our line of popular dispensing specialties and fine pharmaceuticals, including hormones. Our display will include such favorites as Calf Scour Vitaform and Fluoreca Calarsen as well as some new and unique products.

**Ashe Lockhart, Inc.***Booth 28*

Ashe Lockhart, Inc., will exhibit a complete line of veterinary biologics, featuring an improved pasteurized Anti-Canine Distemper Serum and Anti-Infectious Canine Hepatitis Serum, a new intradermal vaccine for infectious canine hepatitis, as well as the well-established intradermal Canine Distemper Vaccine.

**Austin Laboratories, Ltd.***Booth 9*

Austin Laboratories cordially invite you to visit our Booth 9 at the Toronto Meeting. In a complete line of veterinary products, we will feature Streptazine Tablets and Streptazine S. A. Tablets.

**California Spray-Chemical Corporation***Booth 24*

The California Spray-Chemical Corporation's booth features their complete line of external parasite controls. Behind lighted picture frames are displayed major products. A twenty-minute, full-color motion picture film "Livestock Pest Control" will be shown in the booth. This film illustrates in extreme close-ups major parasites that attack animals and their treatment with Ortho insecticides.

**Campbell X-Ray Corporation***Booth 6*

Campbell X-Ray Corporation of Boston will exhibit the latest model X-Ray Animagraph designed and built for the exclusive use of the veterinarian. This new Animagraph contains many important features not found in earlier models.

**The Corn States Serum Company***Booth 55*

The exhibit of the Corn States Serum Company will consist of samples of many biological products produced by the company, including specialties; also products of firms that we represent as distributors.

**CSC Pharmaceuticals****A Division of Commercial Solvents Corporation***Booth 21*

C.S.C. Pharmaceuticals, a Division of Commercial Solvents Corporation, cordially invites you to visit Booth 21 where we will display a line of bacitracin veterinary products featuring Bacigro pellets for subcutaneous implanting, Parentracin for intramuscular injection, and ointment for ophthalmic and topical application. Penicillin veterinary products will also be displayed.

**Doho Chemical Corporation***Booth 67*

The Doho Chemical Corporation and its subsidiary, Mallon Chemical Corporation, are pleased to exhibit their preparations; Auralgan, for relief of pain and itching in otorrhea, canker, and ear mites; Otosmosan, for suppurating ears, fungus conditions, and all other forms of aural dermatomycosis; Rhinalgan, the new, pleasant-tasting nasal decongestant which shrinks the mucous membrane without any systemic or circulatory effect, particularly in distemper; and Rectalgan, the liquid topical anesthesia for immediate symptomatic relief of pain and itching in hemorrhoids, and for many other uses pre- and postoperatively. All these medications are routinely used by the medical profession on infants as well as their geriatric patients.

**Dominion Veterinary Supply, Limited**

*Booth 4*

An organization of veterinarians selling only to veterinarians and supplying Canadian-made pharmaceuticals and instruments as well as some of the best known lines of European and United States manufacturers. As we are agents for some of the best known European instrument manufacturers, our export manager will be in attendance for representatives of American companies.

**Drug Publications, Inc.**

*Booth 61*

The new "Blue Book of Veterinary Drugs" will be on display together with the complimentary comments of thousands of graduate veterinarians who say that this is "a much needed service on veterinary drugs, biologicals, and foods." We invite your suggestions and coöperation in making this your quick reference guide.

**Eisele & Company**

*Booth 48*

Eisele & Company will feature a complete line of veterinary syringes and needles; also their precision line of hypodermic syringes both regular and interchangeable types; also veterinary thermometers and Sanelastic bandages.

**Randall Faichney Corporation**

*Booth 40*

The Randall Faichney Corporation of Boston, manufacturers of the well-known line of Viking and Dura Viking syringes, needles, and veterinary specialties, will exhibit at Booth 40. Several new items in the syringe and needle category will be introduced and exhibited for the first time.

**Fort Dodge Laboratories, Inc.**

*Booths 30 and 31*

On exhibit at the Fort Dodge booth will be M-L-V, the original new-type hog cholera vaccine; Longicil, a new, long-acting penicillin compound; Bovinoc, a natural rumen inoculum; Soxipent, newest preparation for treatment and control of bovine mastitis; and Silanox, a new-formula treatment for frothy bloat in ruminants.

**Fromm Laboratories, Inc.**

*Booth 47*

Featuring Anti-Swine Erysipelas Serum and Desiccated Vaccines. Also some Fromm "firsts" such as: Distemperoid Virus, Bivalent Serum, Minkvac, and a number of other interesting biologics.

**Gaines Division, General Foods Corporation**

*Booth 14*

The Gaines Division, General Foods Corporation, will have a display of their "Homogenized Gaines Meal." Representatives will be in attendance at the exhibit to explain the many advantages of this product.

**General Electric Company, Electronics Division**

*Booth 35*

A display of two-way radio equipment suitable for the use of veterinarians in maintaining continuous contact between their offices and cars.

**Gilbert Surgical Supply Company**

*Booth 27*

We are pleased to display several unique veterinary instruments. For the benefit of our American visitors, we have some excellent values in veterinary surgical instruments and sundries at prices which are far below prevailing American prices. Your tourist exemption makes this a practical investment. The United States dollar will be accepted at par.

**Goshen Laboratories, Inc.***Booth 19*

This display will include products of Goshen's own manufacture as well as those of Arnar-Stone Laboratories, Inc., Associated Concentrates, Inc., Cappel Laboratories, the Carlton Corporation, Ciba Pharmaceutical Products, Inc., E. Fougere & Co., Glendale Veterinary Supply Co., Hungerford Plastics Corporation, Micro Instrument & Tool Co., Pyroxylin Products Corporation, Radio Corporation of America, Reed and Carnrick, Inc., Sandoz Pharmaceuticals, and White Laboratories, Inc.

**Hamilton Pharmacal Company, Inc.***Booth 13*

Two items for the treatment of bovine mastitis will be exhibited: (1) "H.P. Vehicle," — A water-in-oil emulsion of neutral pH used as a vehicle for infusing penicillin, dihydrostreptomycin, neomycin, terramycin, etc. (2) "H.P. Vehicle Mastitis Tubes," containing two antibiotics and two sulfonamides . . . in a new-type udder infusion tube.

**Haver-Glover Laboratories***Booths 53 and 54*

Representatives of the Haver-Glover Laboratories look forward to greeting their many friends in Canada at booths 53 and 54. We cordially invite all in attendance at the Toronto convention to visit our display of new pharmaceutical products. Our line of surgical instruments and equipment will be featured as usual.

**Hill Packing Company***Booth 41*

Nutritional Therapy as it may be used in small animal practice will be the central theme of Hill Packing Company's display. All of their products of interest to veterinarians will be shown in a new illuminated, rotating exhibit, and new literature on Prescription Diets will be available.

**Dr. S. Jackson, Importer of Veterinary Specialties***Booth 66*

Electromagnetic Metal Detector; Coecolysin Bengen, world's only veterinary medicament containing the unknown substance produced by the organism itself (called peristaltic hormone in human medicine) which restores peristalsis and maintains it at a physiological level; Rumenotomy Device; Flexible Embryotome and Otrhomin Mol. 530, a new broad-spectrum chemotherapeutic agent.

**Jensen-Salsbery Laboratories, Inc.***Booth 3*

The Jen-Sal exhibit will feature recently developed pharmaceuticals and biologicals plus new instruments and hospital equipment. Particular emphasis will be on calcium therapy in large animals and the treatment of obstinate skin conditions of dogs. Demonstration of hospital equipment will be used in the display.

**Kirschner Manufacturing Co.***Booth 63*

Kirschner Manufacturing Company invites all attending veterinarians to visit their booth. In addition to our line of Veterinary Fracture Equipment, the Edmonds Plastic Animal Cage, Lifetime Aluminum Cage Door, and Portable Zephyr Dryer will be on display.

**J. B. Lippincott Company***Booth 49*

J. B. Lippincott Company presents, for your approval, a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than one hundred of traditionally significant publishing.

**Lloyd Brothers, Inc.**

*Booth 16*

You are cordially invited to visit the Lloyd exhibit where you will be welcomed by experienced representatives who will gladly present the newest advances in pharmaceutical research.

**The S. E. Massengill Company**

*Booth 29*

The S. E. Massengill Company's Veterinary Division will display specialty pharmaceutical products of interest to both large and small animal practitioners. Adrenosem, a new hemostat solution, will be featured.

**Medical Coaches Incorporated**

*Booth 42*

This exhibit illustrates various types of mobile veterinary clinics now available, and features demonstration of latest model, economically-priced unit designed for practicing veterinarian. As complete Clinic-on-Wheels with own electrical power, refrigeration, hot and cold water, ample storage space, etc., it provides modern facilities in giving service and treatment.

**Merck & Co., Inc.**

*Booth 8*

The display will feature two new products: (1) Cortone Veterinary for the treatment of ketosis in dairy cows and arthritic and inflammatory conditions in various species; (2) Vetstrep (Streptomycin Sulfate Oral Veterinary) a rapid and effective treatment for swine enteritis and calf scours.

**Miles Laboratories, Inc.**

*Booth 36*

Bactine,<sup>®</sup> while gentle in action, is both a powerful germicide and powerful fungicide. This modern formula is highly detergent and an effective deodorant, with itch and pain relieving action. Bactine is singularly devoid of harmful properties and is unusually well tolerated by animals.

**Moore-Thompson-Clinger, Ltd.**

*Booth 44*

Ethical Veterinary Specialties, *i.e.*, Astringent Powder, Diarese, C. P. L. (Cowpock Lotion), Red Udder Liniment, Red Udder Ointment, Fleatex Powder, Canoline, Mangoline, Sulfurea Bolus, Uteroids, and Veterinary Instruments will be displayed.

**Motorola Communications & Electronics, Inc.**

*Booth 26*

Motorola will display the latest and finest in 2-way radio communications equipment suitable to veterinary application.

**Norden Laboratories**

*Booths 1 and 2*

You are invited to visit our display and see new items developed by our pharmaceutical research department for more effective treatment of "frothy" bloat, ketosis, mange in dogs, etc. These, in addition to a complete line of economical and easy to use Norden Bolets,<sup>®</sup> and the new Norvac—Hog Cholera Vaccine.

**Parke, Davis & Company**

*Booth 56*

Parke-Davis cordially invites you to visit booth 56. Members of the Department of Veterinary Medicine will be available to discuss their broad-spectrum antibiotic Chloromycetin, Penicillin S-R, S-R-D (Penicillin with Dihydrostreptomycin), Benadryl, Caladryl, Dilantin Sodium, Thrombin, Topical, Liquid Germicidal Detergent, Lipo-Lutin (progesterone), and vitamins. Literature will be available.

**Chas. Pfizer & Co., Inc.***Booth 43*

Terramycin, Combiotic, Penicillin, Streptomycin and Dihydrostreptomycin dosage forms of the Pfizer Veterinary Antibiotic line will be exhibited by Chas. Pfizer & Co., Inc. Special attention will be directed to our two newest dosage forms. Terramycin Hydrochloride 1-gram tablets (scored); Terramycin for intramuscular injection. Representatives of Pfizer Canada, Ltd., will attend.

**Professional Veterinary Oxygen Equipment***Booth 37*

The Small Animal Oxygen Tent-Incubator is specifically designed to meet veterinary requirements for postsurgery, respiratory failure, cardiac insufficiency, anemia, shock. The Intrathoracic Respirator is for use in all surgery, supplementary anesthesia, and for surgery in weak and debilitated animals. The Ether Unit is a simple, economical, and functional unit of ether-oxygen anesthesia. Small animal masks and catheters will be displayed.

**Ralston Purina Company***Booth 60*

Our exhibit will show the mutual contribution of the veterinary profession and the feed industry to the production of meat, milk and eggs for our rapidly increasing population.

**Rumelk Company, Inc.***Booth 18*

The Rumelk Company will display Ru-Zyme, the only natural rumen inoculum that contains preserved viable rumen bacteria impregnated in an enzyme-treated cellulose substrate. Other products that will be featured will be En-Zymel, Ichor, and Compacto-Vet.

**Sharp & Dohme, Incorporated***Booth 65*

Veterinary pharmaceutical and biological specialties and human products well adapted for veterinary use will be shown. Attention will be directed to the popular and effective sulfonamides, "Cyclaine," a new local anesthetic agent, and special dosage forms of antibiotics.

**E. R. Squibb & Sons, Division of Mathieson Chemical Corporation***Booth 15*

Pharmaceutical manufacturers since 1858 the Squibb exhibit will feature three new veterinary specialties; a local anesthetic, a combination antibiotic ointment, and a canine anthelmintic. Other veterinary pharmaceuticals will be displayed.

**Stevenson, Turner and Boyce Ltd.***Booth 17*

Pharmaceutical products of interest to large animal practitioners will be displayed. Special dosage forms of antibiotics, sulfonamides, hormones, and vitamins will be featured.

**R. J. Strassenburgh Co.***Booth 10*

Naprylate Ointment, Powder, and Liquid for fungus infections; Gezane Ointment and Liquid for Mange; Strascogesic in analgesia; Biphetacel for weight control in dogs; and other products of Strassenburgh research will be featured at the R. J. Strassenburgh Co. Booth.

**Swift & Company—Pard Department***Booth 46*

Swift & Company will again have a colorful and informative display at the Association's annual meeting. The exhibit will feature canned Pard and its new dry dog food, Swift's Pard Meal. This year the exhibit will also feature Swift's Canned Pard and Pard Swift's Cat Food.

**Toronto Elevators, Ltd.**

**Booth 52**

Master Dog Foods, manufactured by Toronto Elevators Limited, Toronto, Ont., are shown at Booth 52. We welcome your inquiries and the opportunity to make your visit to our city a pleasant one.

**Tracerlab, Inc.**

**Booth 22**

Tracerlab's unique Strontium Medical Applicator is a small instrument containing a source of Strontium-90 which emits *beta* rays which can be used in the treatment of such eye conditions as corneal inflammatory lesions of dogs and superficial ocular neoplasms of horses and cows. A model will be displayed at the convention.

The applicator's source of *beta* radiation has a half-life of about twenty-five years and gives a dosage rate of between 35 and 45 Roentgens-*beta*-equivalent per second at the surface of the applicator. A 4 in. D. x 1/4 in. sliding plastic shield protects the user's hand.

**The Upjohn Company (U.S.A.)      The Upjohn Company of Canada**

**Booth 11**

We shall enjoy visiting with you at the Upjohn Company booth. New pharmaceutical and antibiotic products will be displayed. Interesting literature and useful samples will be available for veterinarians.

**Veterinary Medicine**

**Booth 20**

*Veterinary Medicine* will display some of its recent issues and a selected group of late editions of veterinary textbooks. An attendant will be in charge to assist interested visitors in arranging for their subscription or extending it. All are cordially invited to inspect display material.

**Vitamineral Products Company**

**Booth 50**

Booth 50 will be especially attractive to veterinarians interested in nutrition as it applies to veterinary practice. Here, samples and literature will be offered for study of the Vitamineral Products Company's (Peoria, Ill.) complete line of mineral supplements for livestock and poultry. The company is one of the convention's pioneer exhibitors, and its booth is always worthy of a visit.

**Wilson & Company, Inc.**

**Booth 5**

Wilson & Company's display will demonstrate the Balamac and Balamac Plus principles of Ideal Dog Food formulation. Balamac indicates balanced formula with reference to amino acid content, and Balamac Plus signifies balanced ratio of all ingredients. A booklet, "Professional Handbook on Amino Acids and Proteins," will be available at the booth.

**Winthrop-Stearns Inc.**

**Booth 64**

Winthrop-Stearns Inc. will display recently introduced veterinary specialties, i.e., Pluravit Drops, Deleagon, Allegan, Congo Red, and Multibione. We will also feature Eaton Laboratory veterinary products—Furacin preparations, for the effective control of mixed topical infections, bovine mastitis, and porcine necrotic enteritis; Furaspor for the treatment of ringworm.

**Wisconsin Alumni Research Foundation**

**Booth 51**

The immunological approach to the calf scour (virulent diarrhea) problem is presented. Calves and other ruminants are born without antibody protection. Bovine serum solids combined with vitamin K and predigested milk solids (Plasmalac) provides a preventive for this condition. Details of a new treatment for Ketosis in dairy cattle will also be shown.

The following companies will also have exhibits at Toronto but description of their displays had not been received at time of going to press.

**Kellogg Company**  
Booth 38

**Schering Corporation, Ltd.**  
Booth 25

**Sciex (Canada) Ltd.**  
Booth 23

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# CLINICAL DATA

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## The Mastitis Complex

O. W. SCHALM, D.V.M., Ph.D., and GLADYS M. WOODS, M.A.,

Davis, California

MASTITIS in the bovine species is not a specific entity but rather a disease complex resulting from an interplay between bacterial infections and managerial practices. Factors concerned in this are the number of cows comprising the herd, animal replacement methods, cohabitation of animal species, milking methods, and extensive use or abuse of intramammary therapy.

Mammary glands of young cows generally are free of significant bacteria, cows of intermediate age show an increasing incidence of flora, and old cows quite uniformly harbor bacteria in their udders. Bacteria classified as the cocci appear to be more invasive for the bovine mammary gland than the bacilli for, under natural conditions, coccic flora usually predominate.

### THE COCCI

*Streptococci*.—Nocard and Mollereau, in 1887, incriminated the streptococci as the cause of mastitis. Since that time, much of the investigational work has been directed at forms of mastitis caused by the streptococci but the types involved remained ill-defined until 1930 because of inadequate methods of differentiation. During the succeeding decade, the following species of so-called "mastitis streptococci" were defined: *Streptococcus agalactiae*, *Streptococcus uberis*, *Streptococcus dysgalactiae*, *Streptococcus zoëpidemicus*, and Lancefield serological groups G and L streptococci.

*Streptococcus agalactiae* was shown to be the primary species involved and to be responsible, according to surveys in many parts of the world, for 80 to 90 per cent of chronic mastitis. The fact that a striking relationship exists between advancement in lactation age and increasing incidence of infection suggests that *Str. agalactiae* is highly invasive and becomes the significant

organism among flora developed in udders with advancing age. This organism does not invade tissue; its effect upon secretory cells is, therefore, through an irritant formed in the milk. Failure to strip, or poor management practices leading to incomplete let down of milk, will increase the severity of clinical mastitis among cows infected with this organism. *Streptococcus agalactiae* is an obligate parasite of the bovine mammary gland; its spread from cow to cow is susceptible to control, and the chain of infection can be interrupted by segregation of the infected cows and milking them last.

The other streptococci, associated with mastitis, are not dependent upon the mammary gland or milk for survival. For this reason, the mammary gland infections are sporadic and related to management practices peculiar to the herds in which they occur. Reduction in incidence of infections due to *Str. agalactiae* may be followed by a rise in the occurrence of *Str. uberis* and *Str. dysgalactiae*. *Streptococcus zoëpidemicus* is more commonly a pathogen of the equine than the bovine species and has been found in purulent diseases of swine. Its infrequent occurrence as an etiological factor in the mastitis complex has been almost exclusively limited to small dairy herds where cohabitation with other animal species is practiced. Association of the streptococci belonging to Lancefield groups G and L with the mastitis complex has, to date, been limited to a few herds.

Streptococcal mammary infections are susceptible to penicillin infused into the gland by way of the teat canal. In dairy sections where treatment of mastitis with the antibiotics is carried on extensively, the importance of *Str. agalactiae* in the mastitis complex appears to be diminishing.

*Micrococci*.—The pathogenic forms of this genus are called *Micrococcus pyogenes*

From the School of Veterinary Medicine, University of California, Davis.

var. *aureus* or *albus*.<sup>\*</sup> They are characterized by: (1) toxin production in agar containing bovine erythrocytes, and (2) the ability to coagulate rabbit plasma (coagulase test). Harmless members of the genus *Micrococcus* do not produce toxins or coagulate plasma.

In *Str. agalactiae*-free herds, competition for dominance of the udder flora generally takes place between the pathogenic micrococci, the harmless micrococci, and the non-*agalactiae*-type streptococci, such as potentially pathogenic *Str. uberis* and *Str. dysgalactiae*, or saprophytic streptococci. *Micrococcus pyogenes* apparently is more invasive for the mammary gland than these other groups. In large, machine-milked herds, such as are common in California, wherein extensive use has been made of intramammary infusions of the antibiotics, *M. pyogenes* has now become the major organism of concern in the mastitis complex.

Long-term studies conducted in two large machine-milked herds of Holstein-Friesians, to be referred to as A and B, respectively, and short-term investigations on a number of additional herds have yielded findings which, in general, warrant these statements regarding *M. pyogenes* mammary infections in herds free of *Str. agalactiae*:

1) The occurrence of *M. pyogenes* in individual cow samples of milk, incubated before culturing, has been found to range between 30 and 70 per cent of a herd with an average of between 40 and 50 per cent.

2) Establishment of infection in the mammary gland is not, as a rule, sudden and permanent, as is usually the case with *Str. agalactiae*, but may require one or more lactations before a persistent shedder-status results.

3) Using, as a criterion of infection, the presence of *M. pyogenes* in more than one-half the milk samples obtained from an individual cow during a lactation, the incidence of infection in herd A, milking about 110 cows, showed an increasing-with-age pattern (table 1).

4) Clinical mastitis in herd A appeared in 75 out of a total of 657 lactations. Of the lactations showing mastitis, 85 per cent occurred among cows shedding *M. pyogenes* in more than 50 per cent of their milk samples. However, the incidence of clinical mastitis among all lactations in cows shedding *M. pyogenes* at that rate was only 19 per cent.

5) The low incidence of clinical mastitis (19%) in the presence of a high infection rate with *M. pyogenes* suggests that in the course of the infection some cows develop a tolerance or resistance

to the organism. A further indication of an immune response is that some cows, after being infected for several lactations, may enter a non-shedder phase of variable duration, after which *M. pyogenes* may appear in the milk again.

TABLE 1—Incidence of Infection in Herd A Showing an Increasing-with-Age Pattern\*

Lactation	No. of cow-lactations	Infection (%)
1	114	20
2	103	36
3	80	55
4	78	59
5	74	70
6	66	59
7	50	78
8	42	74
9 to 13	50	68

\*Data accumulated over a five-year period in herd A on 207 cows and 657 separate lactations.

6) A high incidence of clinical mastitis associated with *M. pyogenes* infection has generally been related to the use of milking machines in a way that may cause trauma or tissue stresses.

7) Histological sections of chronically infected glands have shown definite evidence of tissue penetration by *M. pyogenes*.

8) Intensive control measures carried on over a seven-year period in herd B, milking about 225 cows, have demonstrated that the source of *M. pyogenes* for infection of the mammary gland is essentially other infected glands. By strict segregation of shedder cows and intensive intramammary therapy, the incidence of infection was reduced from 50 per cent to less than 5 per cent of the herd.

9) Intramammary therapy with penicillin, in herd B, using not more than 400,000 units distributed among four doses failed to sterilize more than 20 per cent of lactating quarters shedding *M. pyogenes*. Similar treatment of infected dry glands produced 60 to 70 per cent sterile quarters. A higher rate of recovery in both lactating and dry glands resulted from 4 million units of penicillin distributed over four doses and, in resistant infections, further recoveries were obtained by giving repeated massive treatment with penicillin alone or in combination with dihydrostreptomycin (total 4 to 8 Gm. per treated quarter).<sup>1,2</sup>

Certain findings from the foregoing information accumulated on *M. pyogenes* infections may afford presumptive confirmation of the actual histological evidence of tissue penetration by this organism. The majority of cases of clinical mastitis in herd A occurred among cows shedding the organism in more than 50 per cent of their milk samples and this may indicate a relationship between the higher shedding rates and tissue invasion. The association of clinical micrococcal mastitis with misuse of the milking machine suggests that condi-

\*Formerly called *Staphylococcus aureus* or *albus*.

tions causing tissue stresses may disturb an equilibrium between the tissues and the infecting organisms, activating the infective process and thus leading to inflammation. The refractoriness of long-standing infections to the established therapy of massive doses of penicillin alone or in combination with dihydrostreptomycin is a further possible indication of tissue penetration.

#### THE BACILLI

The bacilli of special significance in the mastitis complex are *Escherichia*, *Aerobacter*, *Pseudomonas*, and *Corynebacterium*. In general, the bacilli have been associated with sporadic, fulminating mastitis. Evidence is now accumulating that herd-wide infections may also occur.

**Coliform Mastitis.**—*Escherichia coli* and *Aerobacter aerogenes* are the main coliform organisms involved. Acute mastitis of sporadic nature has been traced to these organisms, but in recent years reports on enzootic coliform mastitis have been increasing in number.<sup>3,4</sup> In the previously mentioned herd B, this type of mastitis had not been encountered prior to 1947 but since that time it has become enzootic.<sup>5</sup>

When the incidence of shedders of *M. pyogenes* in herd B had been reduced from 50 to 27 per cent, coliform mastitis appeared spontaneously and it has persisted as a serious herd problem. A variety of coliform organisms have been involved, suggesting environmental origin of the significant bacteria rather than introduction of an exotic infection from outside sources. No herd problem with coliform mastitis has occurred in herd A where the spread of *M. pyogenes* was uncontrolled.

The problem of prevention of infection with coliform organisms in herd B has not been solved and, currently, cases of acute coliform mastitis develop frequently and without warning. In addition, cows are constantly found exhibiting a transitory shedding of coliform organisms in their milk without developing clinical mastitis. A reasonably effective pattern of therapy using dihydrostreptomycin has been described.<sup>5</sup>

***Pseudomonas Aeruginosa*.**—This soil-water Bacillus has been recognized as a potential cause of mastitis since 1926 when Pickens, Welch, and Poelma<sup>6</sup> incriminated it as the etiological factor in enzootic mas-

titis in a single herd. Tucker<sup>7</sup> in 1950 presented evidence to indicate that *Ps. aeruginosa* appeared as a contaminant in materials and equipment employed in intramammary therapy against streptococcal infection, and post-treatment mastitis due to this contaminant developed among some of the treated cows. Our studies have revealed two herds in which *Ps. aeruginosa* mastitis was associated with intramammary therapy administered by the dairyman and/or milkers.

*Pseudomonas aeruginosa* infections may be classified as latent with spontaneous recovery, chronic with intermittent exacerbations, or fulminating mastitis leading to destruction of the involved gland or death of the cow. A chronic case was observed in which the infection persisted over five lactations and failed to respond to a variety of antibiotics or chemotherapeutic agents employed singly or in combination. Two acute cases with complications are of interest. In one instance, extensive necrosis of the parenchyma with erosion of the blood vascular system led to filling of the quarter with blood which failed to clot. The owner daily stripped the blood from the gland to relieve the pressure. The animal finally progressed to an advanced anemic state. A second cow in the same herd, after a protracted illness beginning with acute mastitis associated with this organism, became moribund and was destroyed. Postmortem examination revealed multiple, pea-size, caseous abscesses in both lungs from which pure cultures of *Ps. aeruginosa* were obtained.

Mammary infections with *Pseudomonas* are becoming more common and as yet a satisfactory treatment has not been found. In fact, since this form of mastitis is generally chronic and refractory to penicillin, dihydrostreptomycin, and aureomycin, one may suspect *Ps. aeruginosa* as being involved when cases of chronic mastitis of unknown etiology have failed to respond to repeated infusions with these antibiotics.

***Corynebacterium Pyogenes*.**—This pathogen is commonly encountered in suppurative processes of the cow and, therefore, is not an unusual attacker of the mammary gland. However, the manner in which the organism is involved in the mastitis complex is unusual. *Corynebacterium pyogenes* is rarely observed as a latent infection in lactating glands, but rather is almost ex-

clusively seen in well-advanced mastitis occurring in dry cows. A characteristic, pathognomonic for this form of mastitis, is the formation of a profuse amount of foul-smelling, purulent exudate within the involved quarter. Christiansen<sup>8</sup> has shown that the foul smell is produced by an anaerobic *Micrococcus* (*Micrococcus indolicus*) commonly found in association with *C. pyogenes*. In the rare instances of *C. pyogenes* mastitis in which *M. indolicus* is not present, the exudate is odorless.

In the British Isles, *C. pyogenes* is commonly encountered in mastitis occurring in dry cows during the summer months. For this reason, it has been referred to as summer mastitis. Recently, British investigators<sup>9</sup> have conducted extensive trials using penicillin infusions in dry cows as a prophylactic measure.

Intramammary therapy has been of no avail in frank clinical cases. Massive doses of penicillin, streptomycin, and aureomycin have been tried as well as rinsing the gland with a solution of saturated urea. Surgical removal of the teat, to establish drainage, has thus far proved to be the most satisfactory method for handling such cases.

#### EXOTIC FORMS OF MASTITIS

*Yeast Mastitis.*—Rolle,<sup>10</sup> in 1934, drew attention to the possible involvement of yeastlike fungi in the mastitis complex. In America, Murphy and Drake<sup>11</sup> and Pounden *et al.*<sup>12</sup> have described herd problems of mastitis caused by yeasts. These workers did not associate the mastitis of yeast origin with previous intramammary therapy. However, British<sup>13,14</sup> and Scandinavian veterinarians<sup>15</sup> and, recently, Simon *et al.*,<sup>16</sup> in Wisconsin, have observed violent mastitis, due to yeasts, occurring five to seven days after intramammary infusions of penicillin. An interesting fact in this connection is that growth of yeasts is enhanced by penicillin.

Critical identification of the yeasts was not regularly carried out by the investigators but evidence at hand suggests that more than one genus is involved. The severity of clinical symptoms and extent of damage to the secretory tissue may vary with the specific yeast concerned, for reports to date indicate both an acute transitory disease followed by recovery in one to two weeks, or severe chronic mastitis leading to drying-off of the gland.

*Nontuberculous, Acid-Fast Mastitis.*—Stuart and Harvey<sup>17</sup> of England in 1951 reported on 5 cases of chronic destructive bovine mastitis resembling tuberculosis, from which rapidly growing, acid-fast bacilli were isolated. The organism involved in some of the cases was similar to *Mycobacterium lacticola*. All cases had a history of previous intramammary injections of oily therapeutic preparations. These investigators were able to reproduce the mastitis experimentally when the organism was suspended in oil or in penicillin in an oil base but not when suspended in a saline solution.

#### DISCUSSION

Unqualified use of the term "mastitis" should be avoided for it fails to convey to the owners and handlers of dairy cows the complexity of the etiology involved in producing inflammation in the mammary gland. Failure to recognize that mastitis is a complex, not a disease entity, tends to cause dairymen to seek solution of the problem in the use of home treatments with therapeutic agents that have proved effective against the once prevalent chronic mastitis produced by *Str. agalactiae*. This extensive use of penicillin and other antibiotics by dairymen has lessened the importance of the streptococci in the mastitis complex. An etiological shift now points to *M. pyogenes* as the primary cause of chronic mastitis since this pathogen is more refractory to the intramammary therapy and readily dominates udder flora in the absence of *Str. agalactiae*. In addition, cases of both chronic and acute mastitis due to a variety of bacilli and yeasts appear to be occurring with greater frequency. Evidence is accumulating to indicate that this is a consequence of both extensive use and abuse of intramammary therapy.

Extensive use of antibiotics, especially in massive doses, may cause both the streptococci and micrococci to be less dominant in the udder flora and this in turn may provide conditions suitable for invasion of the mammary glands by the bacilli, particularly the coliform organisms, prevailing in the environment. Abuse of intramammary therapy refers to improper preparation of the instruments and teat orifice so that potentially pathogenic organisms, which are refractory to the antibiotic employed, may be forced into the gland along with the

therapeutic agent. The infused materials, oil and/or penicillin, may actually favor the growth of such foreign organisms within the gland with resultant acute or chronic mastitis.

Solution of the mastitis problem should be sought in more intensive education of dairymen in the complex nature of its causation, with stress upon proper management to control spread of pathogenic bacteria and to reduce the occurrence of inflammatory reactions among infected cows through use of good milking techniques. Veterinarians should be encouraged to make greater use of laboratory facilities when dealing with herd problems of mastitis so that specific control measures may be directed against the particular etiological factors involved.

Investigations on mastitis should turn from merely testing the effect of therapeutic agents against specific organisms to more basic studies. The pathogenesis of *M. pyogenes* is an important phase to be solved and more knowledge is needed relative to a possible competition in nature between the cocci and bacilli for dominance of udder flora. The potentiality of increasing the rate of bacillary infection in the absence of coccic flora should be considered before further attempts are made to eradicate completely *M. pyogenes* as well as *Str. agalactiae* from dairy herds. In addition, since circumstantial evidence points toward development of an immunological response among cows naturally infected with *M. pyogenes*, investigations should be undertaken to isolate antigenic substances from these organisms in order to determine whether such antigens could be exploited as the means for an artificially induced immune response.

#### CONCLUSIONS

1) Cocci are the dominant organisms in the bovine udder. Both *Streptococcus agalactiae* and *Micrococcus pyogenes* are highly invasive for that organ, but with gradual elimination of the former through the use of antibiotics, the latter is assuming even greater significance in the mastitis complex.

2) Findings on *M. pyogenes* have revealed: occurrence in individual cow samples of incubated milk ranging from 30 to 70 per cent of a herd; increased incidence with increasing lactation age; high

infection rate associated with low incidence of clinical mastitis in well-managed herds, but a more frequent occurrence of clinical symptoms associated with misuse of milking machines.

3) Administration of antibiotics in massive doses by udder infusion and on an extensive scale in a herd may result in partial displacement of *M. pyogenes* with the possibility of subsequent invasion of the mammary glands by coliform organisms or certain other potentially pathogenic bacilli.

4) Mastitis associated with *Pseudomonas aeruginosa* and exotic organisms is being encountered with greater frequency and may be a consequence of both extensive use and abuse of antibiotics.

5) The shift in dominance from *Str. agalactiae* to *M. pyogenes* and the increasing number of different organisms incriminated as agents involved in this disease complex, partially as a result of improper administration of therapy, emphasizes the importance of good managerial practices in controlling mastitis.

#### References

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### Fowl Paralysis and Poliomyelitis

A recent article in a Vancouver (B.C.) newspaper brought an inquiry as to whether there was any possible relationship between fowl leukosis and poliomyelitis in man. The reply of Dr. George E. Cottral, of Michigan State College, was that such a relationship was first suggested in 1894, again in 1916, in 1938, and now in 1952. Dr. Cottral suggested that a polio epidemic among Eskimos was traceable to dried eggs shipped to them from the United States. Public Health investigators at the time laid the blame on a visiting missionary.

Because the two diseases often appeared about the same time during the summer months, a relationship was suspected. However, it is pointed out that the leukosis usually occurs when chickens are from 3 to 5 months old, regardless of when they are hatched. Furthermore, there has been no more poliomyelitis in handlers of diseased chickens than in others, nor do children of poultrymen contract the disease more often than other children.

Dr. Cottral concluded that there is no evidence of relationship between these two diseases and that it is a disservice to the

poultry industry to publicize such hypothetical relationships when the evidence to support it is so deficient.

### Virus Pneumonia of the Pig

The Department of Animal Pathology, University of Cambridge, reports that a pneumonia of swine, distinct from swine influenza, is also caused by a virus. Swine influenza is an acute condition of short duration, occurring especially in the fall and winter, with a mortality of only 1 to 4 per cent in uncomplicated cases. This new virus pneumonia is more chronic and may occur at any time. Secondary infections, are common. Pleuritis is frequently present and necrotic areas teaming with Pasturella organisms develop in the lungs.

However, it has not been possible to experimentally produce pneumonia with cultures of these bacteria alone. The clinical course and the pathological appearance closely resemble the condition formerly called, among other things, "swine pasteurellosis" and "swine plague." However, it is doubtful if Pasteurella organisms *per se* are capable of causing pneumonia in the pig.—Brit. Vet. J., March, 1953.

### Problems with Leptospirosis

The most significant advance in the field of leptospirosis, in recent years, is the recognition that this infection is not rare, according to Drs. Yager and Gochenour of the veterinary division, Army Medical Service Graduate School.

To better appraise the incidence of leptospirosis and to control it, they suggest that: (1) leptospirosis in man and in animals should be a reportable disease; (2) diagnostic laboratory service should be available at federal, state, county, and city levels, for both physicians and veterinarians; (3) a reference laboratory should be established to make definitive identifications of the *Leptospira* organisms isolated, and also to give technical assistance to the diagnostic laboratories upon request; and (4), most important, greatly increased basic research into the epidemiology, epizootiology, prophylaxis, and control of leptospirosis should be conducted.—Am. J. Pub. Health, April, 1951.

## A New Sulfonamide for Veterinary Use

CLYDE F. CAIRY, D.V.M., M.S.

East Lansing, Michigan

A NEW sulfonamide, sulfisoxazole (3,4-dimethyl-5-sulfanilamido-isoxazole),\* has recently been made available to the veterinary profession. Claimed advantages of this sulfonamide include: greater solu-

bility in the body fluids (hence no renal crystallization), lower toxicity, higher blood levels, and greater range of effectiveness.

Reports<sup>1</sup> since this work was done indicate that a suitable blood level is obtained in some normal cows by a single dose of 0.5 gr. of sulfisoxazole per pound of body weight; in others, it was necessary to divide the dose, giving 0.3 gr. per pound three

From the Department of Physiology and Pharmacology, Michigan State College, East Lansing.

\*This product, under the trade-name "soxisol," was supplied by Fort Dodge Laboratories, Inc., Fort Dodge, Iowa.

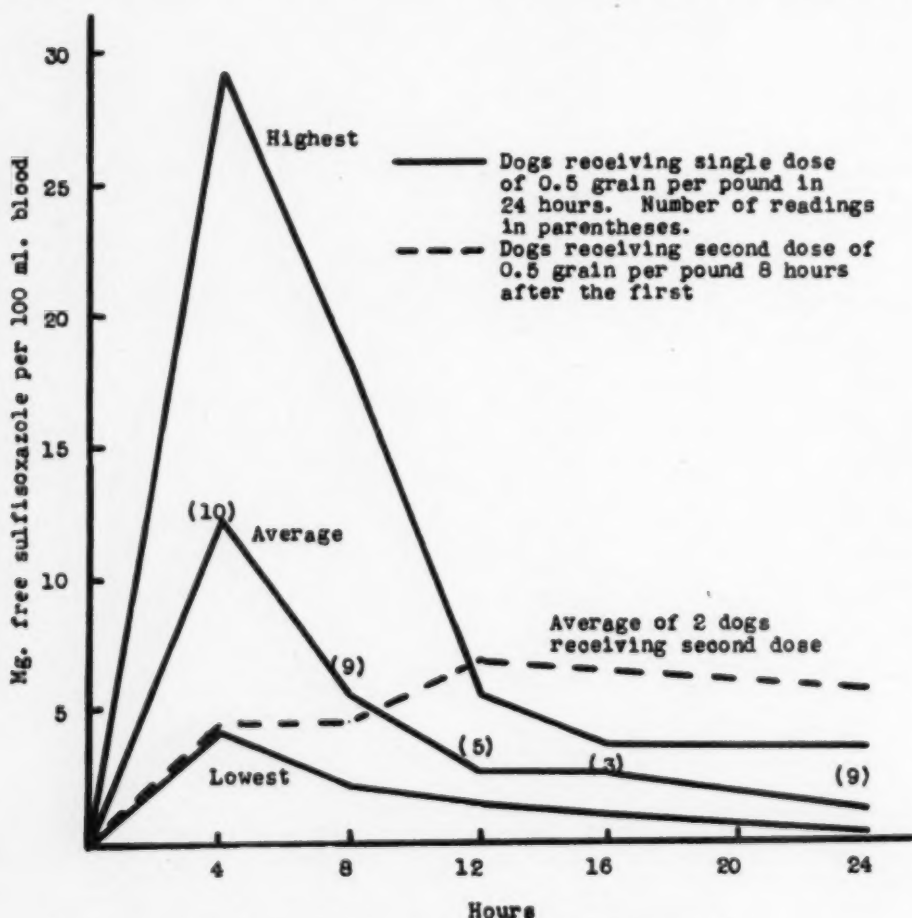


Fig. 1—Averages of blood levels in dogs receiving sulfisoxazole orally.

TABLE 1—Observations on the Toxicity and Effectiveness of Sulfisoxazole in 12 Dogs and 1 Cow

Case	Diagnosis	Weight (lb.)	Dosage	Blood levels (hours)						Remarks
				0	4	8	12	16	24	
3894 German Pointer	Distemper	40	20 gr. daily for 5 days. Had sulfisoxazole previously.	*1.0	4.8	4.5	1.95		0.6	No apparent reaction ex- cept dog appeared brighter.
5219 Boxer	Distemper	60	32 gr. daily for 5 days.	*1.2	4.0	3.45	1.25		0.5	Daily temp. 103.6 F., 102.0 F., then 101.1 F. Discharges abated 3rd day.
7001 German Shepherd	Distemper	72	36 gr. once, 4 days later, 36 gr. daily for 5 days.	*1.4	6.15	2.9	**		2.4	Temp. 103.4 F.; after 5 days, 102.0 F. Discharges persisted 2 days after medication.
9215 Cocker Spaniel	Distemper	22	12 gr. daily for 5 days.	0.1	29.0	2.35		3.5	3.55	Slight improvement in nasal discharge 2 days after treatment.
9029 Hound	Distemper	35	On sulfamera- zine 5 days; off 48 hours; then 20 gr. sulfisoxazole daily 5 days.	0.1	10.5	5.4		0.9	0.45	Temp. normal. Discharges disappeared in 48 hours.
8941 Brittany Spaniel	Distemper	22	12 gr. daily for 5 days.	**	28.0	18.0		3.4	0.6	Temp. from 103.6 F. to 101.9 F., in 24 hours. Nasal discharge cleared in 72 hours. Eye dis- charge cleared in 24 hours. Much improved in 24 hours.
8940 Brittany Spaniel	Distemper	20	12 gr. daily for 5 days.	**	5.35	2.05		**	**	Temp. from 103.2 F. to 102.0 F. and eye dis- charge cleared in 24 hours; nasal discharge in 72 hours.
8949 Collie	Septic metritis (hemolytic Streptococcus)	56	28 gr. daily 5 days. Peni- cillin and streptomycin intra-uterinely first 2 days.	0.1	14.1		5.4		0.2	Temp. from 104.0 F. to 102.6 F. in 5 days. Me- tritis cleared.
8586 Cocker Spaniel	Distemper	24	12 gr. daily 5 days. Had sulfisoxazole previously.	0.3	9.1	3.85	1.45		0.55	Temp. 103.8 F. to 101.4 F.; discharges cleared in 48 hours.
9129 Gordon Setter	Distemper	64	32 gr. daily for 4 days.	0.1	10.7	7.3	2.3		1.2	Temp. 102.2 F. to 102.5 F. for 4 days.
8022 Collie	Peritonitis following ovariectomy	40	20 cc. dis- temper anti- serum. Sulfis- oxazole (20 gr.) at 0, 8, 24 hr.	0.3	2.8	6.0	9.6		9.1	Temp. 104.2 F. to 101.6 F. in 24 hours.
9239 English Setter	Distemper	50	24 gr. at 0 and 8 hours, then daily for 5 days.	*4.0	5.9	2.45	3.95		2.05	Daily temp. 104.6 F., 102.2 F., 104.6 F., and 108.2 F. Died in con- vulsions.
Holstein- Friesian cow	Septic mastitis	1100	500 ml. of 12.5% sulfisoxazole intravenously.	0.2	15.2	9.1	6.0		1.45	Mastitis improved.

\*May have been on course of sulfonamide previously. \*\*Sample clotted.

times daily. In normal dogs, it was found that 0.8 gr. of the drug per pound of body weight daily, in a single dose, maintained an adequate level in the majority of cases. By using an initial dose of 0.8 gr. per pound followed by 0.3 gr. per pound every eight hours, a consistently high level was produced.

This study involves the determination of blood levels in clinical cases and the observation of effectiveness and signs of toxicity.

#### MATERIALS AND METHOD

The blood levels were determined by the method of Bratton and Marshall.<sup>2</sup>

All the sulfoxazole given to dogs was administered orally in tablet form. The 1 cow reported received the sulfonamide intravenously. The dogs were maintained on a ration of meat scraps and a commercial dog food. Blood samples were taken at the time of drug administration (0 hours) and at four, eight, twelve (or 16), and twenty-four hours after treatment. It will be noted that the drug was administered daily for one to five days in most cases, although the blood levels were determined only during the first twenty-four hours. Two dogs (9239 and 8022) were given a second dose eight hours after the first. Observations on the toxicity and the effectiveness of the treatments were made in the small animal and the ambulatory clinics.\*

#### RESULTS AND DISCUSSION

The results are tabulated in table 1.

Figure 1 shows a summary of the data on the blood levels in the 10 dogs that received the sulfoxazole in a single daily dose, and also the 2 that received a second dose eight hours after the first. These blood levels are similar to those reported elsewhere.<sup>1</sup> No evidence of toxicity of the sulfoxazole was found in any of these cases.

As noted in table 1, most of the animals showed improvement of varying degrees. In the opinion of the clinicians, this sulfonamide was at least equal to the others in effectiveness.

While only 2 animals are involved, the data indicate that a second dose eight hours

after the first sustains the blood level longer. It also appears that a dosage larger than 0.5 gr. per pound initially would result in reaching a desirable blood level with greater certainty.

#### SUMMARY

The results of a study of the toxicity, effectiveness, and the blood levels of a new sulfonamide, sulfoxazole, used in clinical cases in 12 dogs and 1 cow, are presented. The drug may have to be administered more often than once daily to obtain sustained blood levels. An initial dose larger than 0.5 gr. per pound of body weight is needed to be certain of a quick, adequate blood level. No signs of toxicity were noted. This sulfonamide appears to be effective in the conditions treated.

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#### Rationed Grazing to Prevent Bloat

New Zealand dairymen are experimenting with a method of strip grazing, not only to prevent bloating of their cows but to get a maximum use of their forage. This requires the cows to eat the grass with the clover, stem and all, before a new strip is exposed. A light electric fence is moved just a few feet at a time, in some cases every two or three hours, in other cases twice or even only once a day.

The cows soon learn to graze facing the wire, thus there is a minimum of trampled forage. During the period of rapid growth the ungrazed portion is harvested as hay or silage. This method requires more labor, yet, because of the better use of forage and the reduced losses from bloating, it is economical.—*Hoard's Dairyman*, March 25, 1953.

#### Tuberculosis in the Cat

Daily, subcutaneous 0.5-Gm. doses of dihydrostreptomycin were well tolerated by 7 of 8 cats and produced lasting clinical recoveries in cats with skin and open bone tuberculous lesions.—*Vet. Bull.*, Feb., 1953.

\*The author is indebted to Dr. R. G. Schirmer and to Dr. E. A. White for cooperation in obtaining the blood samples and observing the effects of the treatments in the dogs and the cow, respectively.

## Histoplasmosis in Animals

C. R. COLE, D.V.M.; R. L. FARRELL, D.V.M.; D. M. CHAMBERLAIN, D.V.M.;  
J. A. PRIOR, M.D.; SAMUEL SASLAW, M.D.

Columbus, Ohio

HOSTS SUSCEPTIBLE to histoplasmosis include many animals in addition to man. So far as is known today, histoplasmosis affects dogs more often than any other domestic animal. Spontaneous histoplasmosis has been found in the dog, cow, cat, rat, mouse, skunk, and recently we have found it in a Kodiak bear.

Geographically, most of the reported infections in animals have occurred in the east central United States. We have studied 62 confirmed cases of histoplasmosis in dogs in our laboratory during the past four years. The lifetime habitat of these infected dogs was Ohio except for 1 from each of the following states: South Carolina, Wisconsin, Tennessee, and Indiana. Most of the dogs represented a single pet owned by the client. One was a single affected dog in a kennel of 16; another, a single affected dog out of a kennel of 9. One Boxer pup came from a kennel in Tennessee where several litter mates became sick and 4 proved to have *Histoplasma* infection, thus indicating that this disease can be a kennel problem.

The incidence of the disease in animals is not known. Of the 14,000 dogs admitted to the clinic at the Ohio State University College of Veterinary Medicine during a four-year period, 62 (0.44%) were found to have histoplasmosis.

### SYMPTOMATOLOGY

Chronic dysentery and chronic cough of dogs are two perplexing problems seen often in our clinic. Some of these problem cases with a history of chronic, intractable cough, or dysentery which fails to respond to any presently known therapeutic agent, were found to have active histoplasmosis.

Most of the common symptoms observed were referable to the digestive, lymphatic, or respiratory systems, although the fungus causes lesions in all systems of the body.

In the 62 cases studied, pulmonary nodules seen by x-ray, dysentery, cough, emaciation, anorexia, and vomiting were the signs most often observed. These were followed in diminishing order of incidence by dermatitis, irregular fever, enlarged palpable mesenteric lymph nodes, dyspnea, anemia, arthritis, ascites, icterus, other enlarged lymph nodes, hepatomegaly, and splenomegaly (table 1).

TABLE 1—A Summary of Clinical Signs and Laboratory Findings in 62 Cases of Canine Histoplasmosis

Sign	No. of dogs*
Pulmonary nodules on x-ray	36
Dysentery	26
Cough	24
Irregular leukocytosis	22
Enlarged lymph nodes other than mesenteric	22
Anorexia	21
Enlarged, palpable mesenteric nodes	20
Emaciation	18
Vomiting	17
Dermatitis	15
Irregular fever	13
Dyspnea	9
Anemia	8
Asymptomatic	6
Arthropathy, lameness	6
Enlarged liver	5
Enlarged spleen	4
Ascites	4
Icterus	3
Course	
acute	7
chronic	46
benign	6
recovery	3

\*Fifty-six of the 62 dogs in this series were tested with histoplasmin and all were positive except one.

Seven of the 62 dogs were classified as acute progressive, 46 as chronic progressive, 6 as benign, and 3 as chronic histoplasmosis with recovery. The course of the 7 acute cases was rapidly progressive, varying from two to four weeks. Those 46 animals whose symptoms developed slowly yet progressively for two and one-half to twenty months were considered as chronic progressive histoplasmosis.

Benign histoplasmosis was a logical classification for 6 dogs with no apparent functional disturbance.

Three dogs reacted to histoplasmin and had chronic dysentery. One of those also had a chronic cough. *Histoplasma capsu-*

From the Colleges of Medicine and Veterinary Medicine, Ohio State University, Columbus.

This investigation was supported in part by a research grant from the National Institutes of Health, Bethesda, Md.

Presented before the National Histoplasmosis Conference, Excelsior Springs, Mo., November, 1952.

*latum* was demonstrated in biopsies of these animals. In all 3 cases, the symptoms gradually subsided and, after an observation period of seven months, apparently have recovered.

The mortality of the acutely ill dogs was 100 per cent. Eight of the chronically ill died. The remaining chronic, and all benign, cases were destroyed.

In the past, histoplasmosis has been described as a "rare, uniformly fatal disease." Canine histoplasmosis is now recognized not only as an acute and chronic progressive disease but also in a benign form and as a clinical illness from which dogs may recover.

#### **PATHOLOGY**

Commonly observed lesions at necropsy include enteritis, enlargement of mesenteric and other visceral lymph nodes, small pulmonary nodules, and enlargement of the bronchial lymph nodes. Other lesions encountered less frequently include occasional enlargement of the liver, ulceration of the gastric and buccal mucosa, small elevated nodules in the spleen, icterus, and ascites. The adrenal glands, kidneys, pancreas, esophagus, and other organs occasionally contain nodular, granulomatous masses.

#### **DIAGNOSIS**

Many dogs with histoplasmosis have a history of chronic, intractable cough or dysentery which fails to respond to any presently known therapeutic agent. Twelve of our cases were destroyed after all attempts, including antibiotic therapy, failed to correct the persistent dysentery. Other signs, such as enlarged mesenteric lymph nodes, anorexia, emaciation, pulmonary nodules seen on chest radiograms, enlarged liver or spleen, and ascites should suggest histoplasmosis.

The canine histoplasmin skin test should be applied to all animals with symptoms even remotely indicative of histoplasmosis.<sup>1</sup> Intradermal administration of 0.1 cc. of the skin test antigen at the lower edge of the flank was found to be a satisfactory procedure. After forty-eight hours, the site of the test should be examined. Edema and some induration, at least 5 mm. in diameter, at the site, with varying degrees of peripheral hyperemia, characterize a positive reaction.

The clinical diagnosis may be confirmed

by obtaining a mesenteric lymph node, liver, spleen, or lung biopsy. Culture of *H. capsulatum* and/or microscopic demonstration of the fungus in the lesions establishes the diagnosis. This method permitted confirmation of the clinical diagnosis in one-third of the 62 cases in this series; the remainder were confirmed on postmortem examination.

If the animal dies or is destroyed, a necropsy will reveal nodules in the viscera and ulceration of gastric, intestinal, or oral mucous membranes. Culture or microscopic identification of the causative fungus in the lesions is necessary for confirmation of the diagnosis. Two-thirds of the cases in this series were not confirmed until after necropsy.

#### **STUDIES ON COMMUNICABILITY**

Little is known concerning modes of transmission and the communicability of histoplasmosis in man or animals. It is not known if exposure of man to animals with histoplasmosis is important in the epidemiology of human histoplasmosis. While studying this problem, we made several observations of interest. Pathological and mycological studies on dogs with spontaneous histoplasmosis were made to determine the various means by which *H. capsulatum* might be eliminated from dogs and thus contaminate the environment of other animals or human beings. Our results showed that there are at least four potential routes of dissemination of the fungus from dogs.<sup>2</sup>

1) The finding of *H. capsulatum* in the tracheal and bronchial exudate, bronchial nodes, and in the lungs suggests that sputum may be a source of infection.

2) Ulcerative and proliferative lesions containing *H. capsulatum* in the mouth, esophagus, and stomach suggests the possible elimination of the fungus from the upper digestive tract by saliva or vomitus.

3) Extensive enterocolitis was a common finding. The organism was demonstrated in the expelled feces as well as in the intestinal lesions.

4) Granulomatous lesions that contained *H. capsulatum* were found in the wall of the bladder and in the kidneys. Thus, urine can be a source of infection.

Several observations resulting from our studies on histoplasmosis of man and animals are summarized below:<sup>2</sup>

1) Three of 5 healthy, histoplasmin-negative dogs developed histoplasmosis while in a room with 8 dogs with spontaneous histoplasmosis.

2) Two dogs maintained in our clinic for five years as blood donors contracted histoplasmosis.

3) No evidence of histoplasmosis was found in 2 dogs which were exposed to the animals with spontaneous disease as well as to 9 dogs with artificially induced histoplasmosis.

4) Serological, radiological, and physical examination of 68 persons who had household contact with dogs affected with active histoplasmosis revealed no indication of histoplasmosis in any of the people. Moreover, there was no evidence that any of 12 laboratory workers had active histoplasmosis as a result of prolonged exposure to dogs with both naturally occurring and artificially induced histoplasmosis. However, 7 of these persons showed positive skin reactions.

In spite of the fact that no proof of a causal relationship could be shown to exist between the disease in dogs and man, the infected dog should be considered a potentially dangerous source of *H. capsulatum*, because it has been demonstrated that the fungus can be disseminated via sputum, saliva, vomitus, feces, and urine.

Further studies are required to determine if man and animals are infected from a common source or if animals with histoplasmosis contaminate the environment from which man becomes infected.

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### Gleanings from the Animal Agriculture Conference, Purdue University, April 20-21, 1953

A cynic may know the cost of everything but the value of nothing.

Prior to 1945, over 280 million cattle were tested for tuberculosis at a cost of \$250 million. As a result, bovine tuberculosis in man has become a medical curiosity.

The ideal of medicine is the prevention of disease; treatment therefore indicates failure.

Those who say that nothing is known about a disease may mean only that nothing is known that they like to hear.

Research in animal disease is far behind research in agricultural management or marketing.

The farm value of poultry is only half that of swine, yet four times as much

is spent on research of poultry diseases as on swine diseases.—*L. M. Hutchings, D.V.M., Purdue University, Lafayette, Ind.*

• • •  
We need new ideas and new developments even though they disturb present industries.

We are now worrying about surpluses but it could be for the last time.—*H. J. Reed, Ph.D., Purdue University, Lafayette, Ind.*

• • •  
Physiology is the most neglected major field in poultry research.

The other three sections recommended research on bloat. Poultry do not bloat but they do have "blow-outs."—*Cliff Carpenter, D.V.M., Chicago, Ill.*

• • •  
High protein forages are desirable but they seem to increase bloat. Losses both from bloat and from wasted forage could be greatly reduced by chopping the legumes for silage instead of pasturing.—*George D. Scarseth, Ph.D., Lafayette, Ind.*

• • •  
The best formula for research is: (1) want to know; (2) don't get discouraged; and (3) keep working.—*C. F. Kettering, D.Sc., Dayton, Ohio.*

• • •  
Farmers are a powerful minority because they enjoy the confidence of the public. However, their favored position could be quickly destroyed by another potato scandal or a prolonged fight over a butter subsidy.—*Elmo Roper, N.B.C. Commentator, New York City.*

• • •  
We are spending on research for agriculture only one ninth as much per unit of income as . . . industry is spending on research.

It may surprise many of you who assume that tax money provides the most research that industry spends \$140 million a year for research on agricultural products and on machinery and materials used in agriculture, whereas both state and federal expenditures total only \$107 million.

It is difficult to draw a sharp line between basic and applied research; but such an effort was made recently and 12 per cent of our work was classed as basic.—*Hon. Ezra Taft Benson, U. S. Secretary of Agriculture.*

## Rabies in Iowa

STANLEY L. HENDRICKS, D.V.M., M.P.H., and H. U. GARRETT, D.V.M.

*Des Moines, Iowa*

AVAILABLE records<sup>1,2</sup> indicate that the first reported case of rabies in animals in Iowa occurred in a dog in 1905. Since that time, cases have been reported among animals in the state every year except 1906, 1910, and 1914. The first case in wild animals was reported in 1916. This was a skunk and is of interest inasmuch as Seton<sup>3</sup> stated that a small spotted skunk was found in the Marshalltown area (central Iowa) in 1902 and that they were "new in the country." Also of interest is the fact that these animals were often referred to as "phobey cats" in western United States because they were known to have been the source of hydrophobia in human beings.<sup>4</sup>

Chart 1 indicates the numbers of reported cases in wild and domestic animals by year for the period 1905 through 1951. These figures indicate a cyclic nature of the disease in Iowa. The number of reported cases was comparatively high for

the years 1924 through 1931. A sharp drop starting in 1932 continued until a low point was reached in 1935. In 1936, a gradual incline began and continued until 1949, when there was a marked increase in the

TABLE 1—Species Distribution of 2,916 Cases of Rabies Reported in Iowa During the Period 1905-1951 Inclusive

Species	No.	Species	No.
Dogs	1,544	Ground hogs	4
Cattle	477	Rats	2
Skunks	348	Badgers	1
Cats	253	Goats	1
Horses	79	Mink	1
Swine	90	Monkeys	1
Squirrels	32	Rabbits	1
Foxes	38	Wolf	1
Sheep	16	Muskrat	1
Raccoons	20	Unknown	2
Ferrets	4		

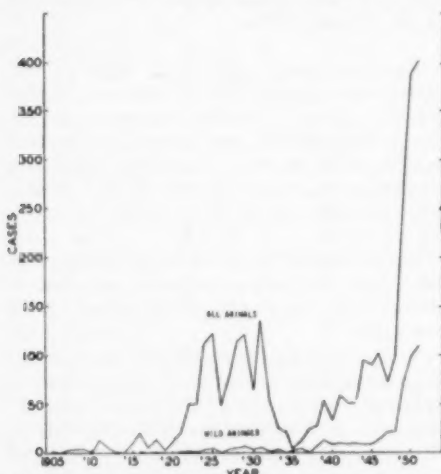


Chart 1—Total reported cases of rabies in animals in Iowa from 1905 through 1951, from reports of State Hygienic Laboratory (1905-1951) and Iowa Veterinary Diagnostic Laboratory (1928-1951).

Dr. Hendricks is public health veterinarian, Iowa State Department of Health, and Dr. Garrett is chief, Division of Animal Industry, Iowa State Department of Agriculture, Des Moines.

number of cases. The rapid increase continued through 1950 and started to level off in 1951. Rabies in wild animals increased markedly during the 1949-1951 period. This incidence curve for Iowa differs from the incidence for the entire United States as reported by Fagan.<sup>5</sup> The total for all states reached a high of almost 11,000 reported cases in 1946 and declined to less than 8,000 cases in 1949.

Rabies has been reported among 20 different species of animals in Iowa during the 47-year period (table 1). Among wild animals, many more rabid skunks are reported than any other species. (For statistical purposes in Iowa rabies reports, the striped skunk and the small spotted skunk (civet cat) have been placed in one group.)

Chart 2, indicating the species distribution of cases reported in 1951, shows an over-all pattern somewhat similar to the distribution in the 47-year period except that dog cases do not constitute as great a percentage of the total. The proportionate number of rabid skunks was twice as high in 1951 as compared with the long period. Of the 165 rabid dogs reported during the year, 86 were from Polk County, with 79 reported cases in dogs for the remainder of the state. Thus, for the state as a whole, the relative epizootiological importance of

the disease among other biting animals, mostly wild animals, becomes more apparent. For the first eleven months of 1952, this trend is more pronounced, with 34 rabid dogs reported and 96 rabid skunks.

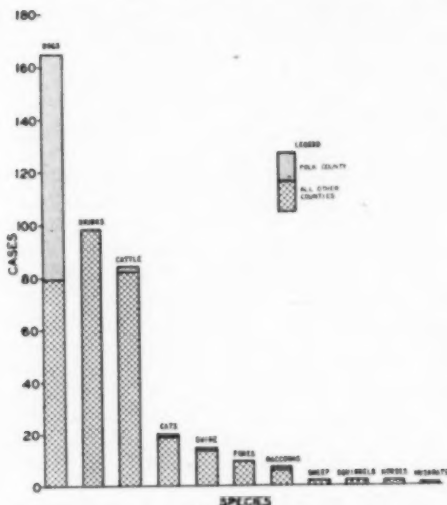


Chart 2—Species distribution of reported cases of rabies in animals in Iowa for 1951.

Figure 1 shows the disease to be distributed widely throughout the state. Cases were reported from 76 of the 99 counties in 1951. In 38 counties, both domestic and wild animals were involved; while wild animals only were involved in 20 counties and domestic animals only in 18 counties. Rabid dogs were reported from 25 counties.

TABLE 2—Percentage Distribution by Months of 1,500 Animal Heads Positive to Rabies, 1916 - 1948 Inclusive<sup>a</sup>

Month	Percentage of total	Month	Percentage of total
January	9.0	July	7.0
February	9.0	August	7.5
March	7.5	September	7.0
April	9.5	October	7.0
May	9.5	November	7.5
June	11.0	December	8.5

The seasonal variation of the disease over a period of years has been slight. A tabulation of 1,500 animal heads found positive for rabies at the State Hygienic Laboratory shows slightly more cases in June<sup>a</sup> than any other month (table 2).

During a period of several years, 41.6

per cent of the heads submitted for laboratory examination have been found positive (table 3).

TABLE 3—Results of Examination of 4,588 Animal Heads (State Hygienic Laboratory<sup>1</sup> July 1, 1938-Dec. 31, 1951, and Iowa Veterinary Diagnostic Laboratory<sup>2</sup> 1928-1951 Inclusive)

	Total Examined	Unsatis- factory (No.) (%)	Positive (No.) (%)	Negative (No.) (%)
State Hygienic Laboratory	2,455	108*	4.4	997 40.6
Iowa Veterinary Diagnostic Lab- oratory	2,133	—	915 42.9	1,218 57.1
Total	4,588	108*	2.3 1,912 41.6	2,566 56.0

\*Includes 1 doubtful.

Since July 1, 1938, the State Hygienic Laboratory has injected mice with brain material from all specimens that are Negri negative, and the Iowa Veterinary Diagnostic Laboratory has carried out this procedure routinely since 1945. Of the 1,029 heads reported positive by these two laboratories on routine examination during a three-year (1949-1951) period, 209 or 20.3 per cent were negative on direct microscopic examination for Negri bodies but were positive by mouse-inoculation tests (table 4). This compares with 19.7 per cent and 10.5 per cent reported by Leach<sup>6</sup> and Johnson,<sup>4</sup> respectively. Damon and Sellers<sup>7</sup> reported that, of 385 positive speci-

TABLE 4—Summary of Microscopic and Mouse-Inoculation Reports of Examination of Animal Brains (Iowa, 1949-1951 Inclusive; State Laboratories<sup>1,2</sup>)

Species	Total pos.	Negri pos.	Negri neg. but mouse pos.	Per cent of total pos. that were Negri neg.
Dogs	429	344	85	19.8
Skunks	252	212	20	8.6
Cattle	197	139	58	29.4
Cats	74	54	20	27.0
Foxes	22	19	3	13.6
Hogs	34	18	16	47.0
Raccoons	17	17	0	0.0
Squirrels	7	6	1	14.3
Horses	7	3	4	57.1
Ground hogs	3	3	0	0.0
Rabbits	1	1	0	0.0
Ferrets	1	1	0	0.0
Sheep	3	3	0	0.0
Badger	1	0	1	100.0
Muskrat	1	0	1	100.0
All species	1,029	820	209	20.3

mens from Alabama, 127 or 33 per cent failed to show Negri bodies. The percentages of positive heads that were Negri negative and found positive on animal in-



ratory. They were asked whether there had been other cases in animals on which a clinical diagnosis of rabies had been made without laboratory examination. Seventy-nine per cent of the questionnaires were completed and returned. The physicians reported no additional cases known to them. The veterinarians reported 138 additional cases on which a diagnosis was made on a basis of symptoms and history. Thus, during 1950, there were at least 138 cases of rabies in Iowa suspected on clinical manifestations in addition to the 373 that were confirmed by laboratory examination.

The exact number of persons in Iowa given antirabies vaccine (Pasteur treatment) each year because of exposure to rabid animals is unknown. In order to estimate the number, a survey was conducted in Polk County (including the city of Des Moines) during the first eight months of 1950. A canvass of the drug supply houses in Des Moines and records of the State Department of Health indicated that 93 persons were given antirabies vaccine. During the same period, 86 cases of animal rabies were reported. The survey thus indicated that an average of 1.08 persons were given Pasteur treatment for each reported case of rabies. It should be mentioned that, through excellent co-operation of the practicing veterinarians in the area, all suspected cases of rabies in animals in Polk County received laboratory examination. Thus, reporting of animal rabies was very complete and the ratio of persons taking Pasteur treatment to reported rabid animals was no doubt lower than it would have been if reporting had not been so complete.

During the 39-year period, 1913-1951 inclusive, 28 human deaths from rabies were reported in Iowa (table 5).

Comparison of the rabies deaths among human beings (table 5) with the incidence of rabies in animals (chart 1) shows that

most of the human deaths occurred during the 1920's and early 1930's, which corresponds with the period of relatively high incidence of the disease in animals.

The 1944 death was a 79-year-old Muscatine County farmer who was bitten by a stray dog on April 2. The dog was not apprehended. The man showed symptoms of rabies on November 27 and died December 1.

The 1951 case was a 6-year-old boy from Des Moines. He was hospitalized on the third day of illness with a history of fever, earache, muscular pains and weakness, and difficulty in swallowing. He soon developed delirium and was unable to walk or to talk coherently. Upon admission to the hospital, he was found to have rigidity of the legs and neck and moderate rigidity of the back. His eyes did not appear to focus properly and choking spasms occurred when he was given fluids. His condition became progressively worse and he died on the twelfth day of illness. Since a definite diagnosis had not been made, a postmortem examination was carried out. Negri bodies were found on microscopic examination of brain tissue, and these findings were confirmed by the Armed Forces Institute of Pathology. Animal inoculations of brain tissue were not made. No history could be obtained of any contact by the boy with a rabid animal. The nearest approach to a definite contact was a visit in June, 1950, to a home where a dog was chained, under observation for rabies. Because this dog was a rabies suspect,\* special care was taken to see that no one had any exposure to infection from the animal. From then until June, 1951, when the boy became ill, there had been no known contact with known or suspected rabid animals of any species. However, during the five months immediately prior to the boy's death, there had been 52 reported cases of rabies in animals (49 dogs) in Des Moines and vicinity.

As the incidence of rabies in animals increases, the chances that people will be unknowingly exposed to rabies are increased correspondingly. This is particularly true of small children who may not report an exposure, as was probably the case in the Des Moines boy.

TABLE 5—Human Deaths from Rabies in Iowa,\*  
1913-1951 Inclusive

Year	No. of deaths	Year	No. of deaths
1913	1	1927	1
1914	1	1928	2
1915	1	1929	3
1916	1	1930	2
1920	2	1931	1
1921	3	1933	3
1923	3	1944	1
1924	2	1951	1

\*From the Division of Vital Statistics, Iowa State Department of Health.

\*Subsequently the dog died and examination of its brain by the Iowa Veterinary Diagnostic Laboratory revealed the presence of Negri bodies.

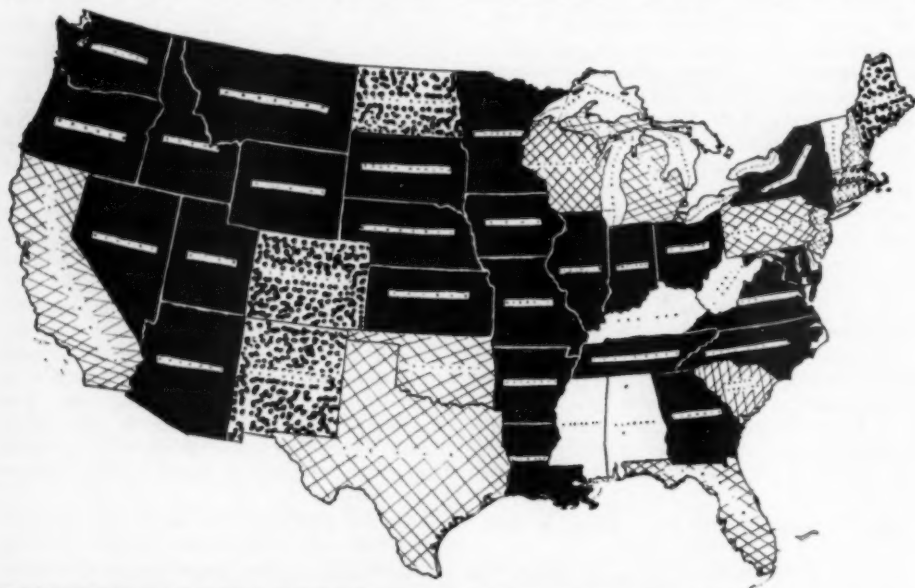
Since antirabies (Pasteur) treatment of human beings is not free of danger, it should be given only when there are specific indications for its use.<sup>6</sup> Borts<sup>7</sup> reported 3 human deaths from rabies vaccine paralysis in Iowa during the period 1940-1950, in contrast to 1 death from rabies for the same period.

From the data presented, it appears that a reservoir of rabies among wild animals, especially skunks, in Iowa has existed for several years. Coordinated, well-planned control programs have been effective in controlling epizootics of the disease among dogs in recent months. For example, Polk County, with the city of Des Moines, reported 86 cases of canine rabies in 1951. Following a control program consisting of vaccination of owned dogs, elimination of stray dogs, and a quarantine or tie-up period, there were only 5 rabid dogs reported from the same area in 1952. While dog rabies can be controlled, methods must be devised so that the reservoir of the

disease in wild animals can also be eliminated in order to obtain eventual eradication of rabies.

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- <sup>8</sup>Borts, I. H., Heeren, R. H., and Hendricks, S. L.: *Rabies Control*. Iowa Pub. Health Bull., 1950.
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■ Passed laws to control cooking of raw garbage fed to swine or are enforcing regulations.  
(Illinois and Missouri bills awaiting governors' signature)

▨ Legislature still considering bills to require cooking of garbage.

▤ Defeated the bill considered recently in legislature.

□ Legislature not meeting in 1953 or are not enforcing regulations.

This map from the American Meat Institute, Chicago, shows the recent action taken in the various states, under the vesicular exanthema control program, to require the cooking of garbage before it is fed to hogs. West Virginia should be added to the black and Alabama to the checked column.

## The Cause and Treatment of Ketosis in Cattle

A. B. CHRISTIAN, D.V.M., and CHRISTIAN P. SEGARD, M.D.

*Biltmore, North Carolina, and Leonia, New Jersey*

THE CONDITION known as ketosis or acetone (acetone is a common ketone) is a disease of dairy cattle. It is seldom seen where the milk production is low or where the breeding bears no relation to milk production, such as in beef or range cattle. The disease is uncommon in countries where the inbreeding of dairy cattle has not been practiced for the production of large quantities of milk. It is estimated that 5 per cent of dairy cattle are afflicted. Sampson<sup>1</sup> reported that some herds ran as high as 40 per cent.

The occurrence of this disease usually follows calving within four weeks. While this period may vary somewhat, the condition is definitely related to the change from little or no production of milk to quantity production. This change occurs in a short time. Since milk production can only occur following calving, the lag period can not be increased. Therefore, the cow goes from no production to heavy milk production in a short space of time. It is a biological miracle that the cow can shift from a standing start of little or no milk production to full speed ahead with 3 to 10 gallons of milk a day, in so short a time after calving.

It is this high production and rapid change which brings about ketosis. The demand on the animal is so great that it initiates the stress reaction that is somewhat similar to the well-known stress reaction in man. The difference is that in man it is frequently a mental stress that originates the general adaptation syndrome and adrenal response, while in cows it is a physical demand and the resulting stress. But in each case, there is an increase in the production of adrenalin from the medulla of the adrenal gland. How much the adrenal gland of the cow is involved is not known. There is a temporary hormonal imbalance.<sup>2</sup>

Where this physical demand for large

quantities of milk occurs daily, there is involvement of the adrenal cortex, the pituitary, and the pancreas. This latter involvement lowers the pancreatic production of insulin. Since the insulin is no longer active at its normal capacity, the amount of carbohydrates in the blood is decreased. It is these blood sugars that assist in the oxidation of fatty acids. The fats can not be reduced to their normal end point, and the intermediate fats or ketones remain in the blood stream and are excreted in the urine and in the air from the lungs. There is also the presence of fats that would be converted to glucose and glycogen by the gluco-corticoid hormones.

When this situation arises, the cow loses its appetite for food and water, and milk production drops to little or nothing. The odor of acetone is easily detected. The milk produced is off-flavor. A continuation of this condition leads to great loss of weight, lack of interest in surroundings, poor coordination in walking, and the end result may be the loss of the cow.

In his excellent series of papers<sup>3-5</sup> Shaw emphasizes a number of points regarding ketosis and indicates the importance of cold, heat, and exhaustion as a cause of stress and strain. Shaw also emphasizes the effective use of cortisone and postulates the involvement of the adrenal and pituitary glands.

There are a number of causes of stress in the human being and we may postulate that those animals having active adrenal glands may show a somewhat similar reaction to stress through this gland.

Perhaps the cow is the only animal that has been bred genetically to make so great a change in milk production. It is not within the realm of genetics that so great a change in so short a time could be made without a physiological reaction sooner or later. In the last fifty years, the cow has progressed from a producer of a gallon of milk a day to where a goodly number produce 5 to 10 gallons a day. A stress reaction is the result in many instances.

This brings us to the statement of Shaw

<sup>1</sup>Dr. Christian is veterinarian at the Biltmore Farms, Biltmore, N. Car.; and Dr. Segard, Leonia, N. J., is medical director of the Wisconsin Alumni Research Foundation.

that "Ketosis in dairy cattle is caused by a temporary hormonal unbalance involving the pituitary-adrenal cortical system." Since one of the hormonal systems was undoubtedly involved in this condition, it was natural to use hormones as a therapy to relieve the condition. Not only are the pituitary and adrenal glands involved, but also the pancreas.

As early as 1947, Shaw<sup>4</sup> found that adrenal cortical extract was effective in the treatment of ketosis. When cortisone and ACTH were isolated, they were found to be effective therapy. The cost was, however, higher than the use of sugar or molasses which had been used to maintain blood sugar levels. Treatment with glucose solution did result in the recovery of the milder forms of ketosis.

It had been observed that large doses of aspirin caused a drop in the liver glycogen in rats.<sup>6</sup> There is also "good indication from the reported data that salicylate may alter the normal function of the liver in carbohydrate metabolism."<sup>6</sup> One of us (C.P.S.) reported<sup>7</sup> that the human dosage of ACTH could be considerably reduced if followed with high dosage of aspirin. It was, therefore, decided to use smaller doses of ACTH in ketosis than that used by others and continue with aspirin therapy. Therefore, 20 units of ACTH was given intramuscularly along with an initial dose of 4 Gm. of aspirin (via balling gun). This was followed with 4 Gm. of aspirin four times daily for three days. (Each 4 Gm. of aspirin contained 400 units of vitamin C and 4 mg. of vitamin K.) At the end of the first day, the cows with ketosis improved to the extent that they were interested in food and water. On the third day, there was an increase in milk production and on the fourth day, milk production was 80 per cent of the normal.

A review of the general literature on animal nutrition seemed to indicate that the bacterial metabolism of the cow produced at least a minimal amount of vitamin K. A brief trial of this high dosage of aspirin without vitamin K produced hematuria. While it would be true under normal conditions that vitamin K would be present in ample amounts, the ketosis syndrome precluded the ingestion of the factors involved in bacterial production of this vitamin. The effect of the high aspirin therapy alone was to produce hemorrhage

(this also occurs in man). While we were able to drop the vitamin C content of the therapy, it would seem best to retain it. This retention is based on the great reduction of vitamin C in the adrenal cortex following corticotropin or aspirin therapy and its excretion in the urine at a high rate in man under identical therapy.

After treatment of several animals, it was found that remissions occurred in about 30 to 40 per cent of the cases. This was offset by increasing the dosage of corticotropin to 40 mg. It was later increased to 50 mg. in order to insure a margin of safety. It was felt that at the level of 50 mg. of corticotropin, subcutaneously or intramuscularly, and 4 Gm. of aspirin with 4 mg. of vitamin K orally as the initial dose, followed by the same amount of aspirin and vitamin K four times daily, would give the response required. The results have justified the increased dosage of the ACTH to 50 mg.

#### SUMMARY

1) Though the cause of ketosis (acetonemia) is unknown, it may be a stress reaction with a hormonal response.

2) Adrenocorticotrophic hormone (ACTH) in large doses has proved effective in treating this condition.

3) Smaller doses of ACTH used in conjunction with salicylates and vitamin K have been shown to be effective in this disease.

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# SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

## A Modified Skin-Mattress Suture

D. D. DELAHANTY, D.V.M., M.S.

*Ithaca, New York*

The sole purpose of a suture is to splint and rest the broken continuity of tissues until healing has occurred. To realize this aim, with the least amount of tissue reaction, certain basic principles must be adhered to. One of the more important principles is the maintenance of the peripheral vascular bed. Tight sutures disrupt normal circulation, which may result in avascular necrosis. If contaminating bacteria are present, abscesses may form, which will delay wound healing and result in ugly cicatrices.

Skin sutures may be classified in two groups — interrupted and continuous. Within these groups, variations occur in the degree of restriction of blood supply. The mattress type of suture, often used in veterinary medicine because of its strength, is an interrupted suture which falls in the category of those which partially occlude the circulation. It has a tendency to cause objectionable cicatrices.

A new variation of the mattress type skin suture will be described. It is useful in other large animals but especially in bovine surgery where the thickness of the skin is greatest. It is a continuous suture designed for aseptic surgery. If asepsis is not attained this suture should, in the pendant portion of the wound, be replaced with interrupted sutures of a similar type which can be removed in case drainage is required. A relatively fine, noncapillary suture material should be used.

This procedure is started as a deep interrupted suture which is placed approximately 2 cm. from the edges of the wound, penetrates the entire skin thickness and, on the return strike, catches the epidermal layer less than 0.5 cm. from the wound edges, then is tied (fig. 1A). From the knot, the needle is carried approximately 1

cm. parallel to the wound edge, then the next deep strike is made. The latter strike is not perpendicular to the wound edge but progresses diagonally across the wound so as to be in position for further advancement in the superficial strike (fig. 1B). The final suture is placed perpendicular to the wound and is tied on a loop or on the tag end (fig. 3). If the deep strike takes a bite in the underlying tissues, it should eliminate subcutaneous pockets. As with any suture, the wound edges may become everted if they are too tight.

The removal of the suture can be facilitated by placing a loop of a suture material under all the sutures on one side of the wound and tying it. Slight tension placed upon this loop will raise the sutures so they can be severed.

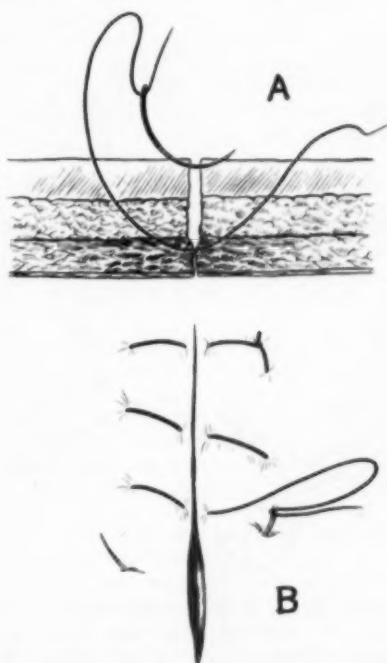


Fig. 1—(A) Cross section of suture showing deep and superficial position of the suture, (B) Diagrammatic sketch of the suture.

Dr. Delahanty is professor of surgery at New York State Veterinary College, Ithaca.

This suture technique would seem to provide certain advantages and a few disadvantages.

The advantages are (1) a minimum restriction of circulation to the healing wound edges; (2) full thickness, edge-to-edge skin

wider, more even distribution of approximating pressure (fig. 2); (5) placing the deeper strike of the suture first permits the surgeon to observe the position of the deeper portion of the suture.

A disadvantage is that the diagonal

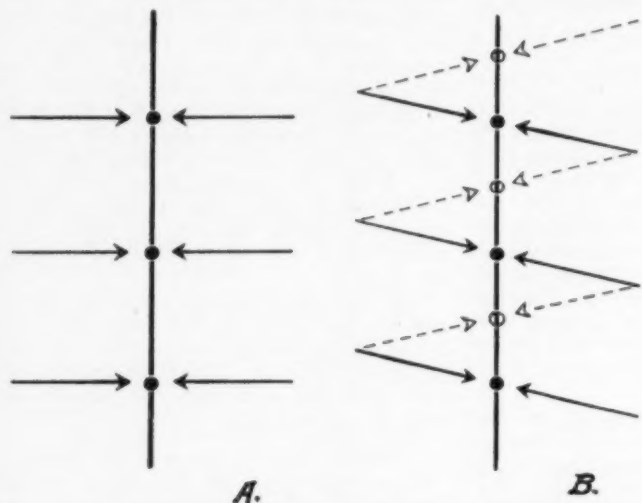


Fig. 2—(A) Lines of tension in interrupted suture. (B) Lines of tension in a continuous suture; note increase in approximating forces.

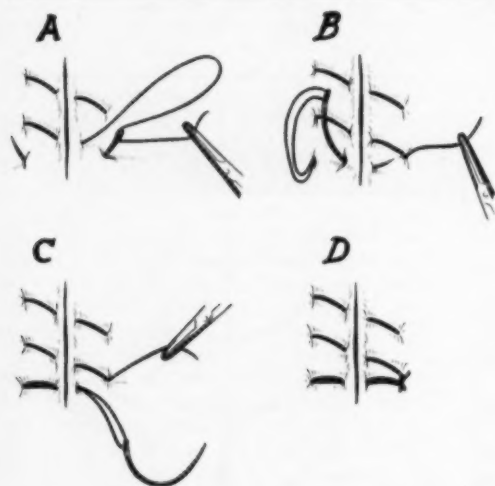


Fig. 3—Steps showing how the final suture is placed perpendicular to the wound and is tied on a loop or on the tag end.

approximation without inversion or eversion; (3) requires less time than interrupted sutures but more time than continuous sutures; (4) pressure points along the wound are the same in number but are not directly opposed and provide a

advancing strike of the needle can cause a slight shifting of skin, but this can be overcome by starting skin closure in the middle of large skin wounds, or by matching cross marks made in the skin prior to surgery.

### Amino Acids and Wound Healing

It has been known for centuries that wounds heal slowly in poorly nourished patients. Increased infection and mortalities have also been observed in protein-deficient animals. Therefore, the effect of deficiencies of various amino acids were studied. In one experiment, one group of rats was given a 20 per cent casein diet while a control group was given 6 per cent. The rate of wound healing in the latter was slower. The sulfur-containing amino acids, methionine and cystine, apparently aided wound healing. Further studies are indicated.—*Nutr. Rev.*, April, 1953.

### Glycerol for Ketosis in Ewes

A year ago, the results from using glycerol in pregnancy toxemia in ewes was very encouraging. This year they have been less so. The condition has been less prevalent in Britain but ewes treated improved only for a few days and then relapsed. They showed no response to second treatment. Similarly, the treatment of cows with acetonemia has been less satisfactory than a year ago. Almost all cows gave a good initial response but symptoms recurred a few days later.—*Vet. Rec.*, March 21, 1953.

### An Operation to Control Blowfly Strike in Sheep

In Australia where the green blowfly, *Lucilla cuprina*, does great damage to the sheep industry, a crude operation has been devised which protects the sheep and eliminates the fly by removing its breeding ground. These flies, like the screw worm fly, "strike" only live damaged skin, usually where it is wet by urine. Other blowflies then infest the wounds made by the *Lucilla*.

To prevent the wetting of woolled skin, the tails are docked short and the woolled skin is clipped off the dorsal surface so that when it heals, the last inch of the tail is bare. Then with wool shears, three elliptical strips of woolled skin are clipped from each side of, and below, the anovulva region, so that when healed the nonwooled skin area will be extended and no wrinkles will be present to be soaked by urine.

Sheep of any age can be operated on but

since it gives a lifetime protection, the younger it is done the better. Lambs also are more easily handled and their wounds heal faster. No after treatment is used but the animals are kept as quiet as possible for a week to promote healing.—*J. Dept. Agric.*, South Australia, Dec., 1952.

### More Uses for the Fetal Extractor

HUGH WALLACE, D.V.M.

Mound City, Missouri

An article in the March, 1953, JOURNAL, p. 163, regarding Frank's fetal extractor was noted with interest. I would like to report how it was used to reduce two compound fractures in calves.

*Case 1.*—A 200-lb. Jersey heifer had a fracture of the right metacarpus with the proximal fragment projecting through the skin about 1½ in. The fracture was fresh but could not be reduced by manual traction. However, this was accomplished by placing the breech-piece of the extractor on the calf's chest, fastening the jack to the foot, and applying traction. The wound was then infiltrated with crystalline penicillin solution, a sulfathiazole dressing was applied, and the leg splinted with heavy gauge tin, well padded. Traction was then released and the calf was given penicillin in oil.

Six months later, the heifer was walking on the leg but the fracture site was still enlarged and marked by a small open wound. After a three-day course of triple sulfonamide tablets, the infection cleared up. Today this heifer is a useful milk cow.

*Case 2.*—A hereford heifer, weighing 400 to 450 lb., had been caught in a fence for about forty-eight hours and, as a result, had a compound fracture of the metacarpus which was grossly contaminated.

Anesthesia was accomplished with 25 cc. of pentobarbital solution given intravenously. This leg was also extended with the Frank's extractor, reduction accomplished, and the wound dressed as in case 1. A surgical stockinette was applied, then cotton padding, and a plaster of paris cast. The calf then was given 3 million units of penicillin in oil and a three-day course of oral sulfonamides. Recovery was com-

Dr. Wallace is a practitioner in Mound City, Mo.

plete and uneventful. No return calls were necessary, and the owner removed the cast about eight weeks later.

### Removal of Sutures

Clipping sutures in a nervous patient is sometimes difficult. Because of the thickness of the blade of a pair of scissors, pressure on the recent wound is somewhat painful. The point of a sharp scalpel will slide under and sever the sutures without this pressure. Furthermore, removing the sutures at once while discharge adheres to them may cause pain and place stress on the wound. If left in, the majority will work out painlessly in a day or two. In some cases, only alternate stitches should be removed daily until all are gone.—*Brit. M.J.*, Dec. 6, 1952.

Ovulation in weaned sows, when the pigs were removed at birth or two days following, failed to occur by the thirty-first day in 40 per cent of sows observed at the Wisconsin Experiment Station.—*Vet. Sci. News*, Jan., 1953.

### Tendon Repair in Cats

A 5-month-old kitten had been in an accident and was unable to use the left hind leg. The hock was flexed and a small hard body could be palpated behind the distal third of the tibia. The kitten was anesthetized and an incision revealed the hard body to be the detached top of the tuber calcis still attached to the superficial flexor tendon. The piece of bone was removed and since the tendon could not be attached to the os calcis, it was sutured to the tendon of the deep flexor. Six months later, no difference could be detected in the two hind limbs.

The second case was a 15-year-old castrated male cat with a completely dropped hock, due to rupture of the tendon of Achilles. When operated on, the tendon was found to be ruptured about 1/3 in. above its insertion into the os calcis. Two sutures of silkworm gut were used to bring the ends of the tendon into apposition. These were reinforced with a number of fine nylon sutures in the periphery of the tendon. Connective tissue was then sutured around the area. The wound was closed and a light plaster cast, extending only

about 1 in. above and below the joint, was applied and left on for one month. In spite of the cat's age, the limb had nearly normal function thirteen days after removal of the cast.—*Vet. Rec.*, March 14, 1953.

### Severed Flexor Tendons in a Cow

A stabled, 5-year-old dairy cow was found with the fetlock of her left hind limb touching the floor and the toes pointed upward. A deep, unexplained wound severing both the superficial and deep flexor tendons was present about 10 in. below the point of the hock.

An iron bar support was fashioned to hold the limb in a normal position. The vertical bar, 17 by 1½ in., to be strapped on the volar surface of the limb, was welded to a horizontal plate turned up in front and on the sides like a boot to enclose the foot. The animal was cast and an attempt made to suture the ends of the tendons. However, the sutures tore out with the slightest movement. The wound was then dressed and the support strapped on. The wound healed in four weeks and the appliance was removed in six weeks. As there was considerable sagging of the fetlock at that time, an elastoplast bandage was applied in a figure 8, and in three months the leg assumed a fairly normal position. Three months from the time of injury, the cow walked with only a slight limp, which soon disappeared.—*Vet. Rec.*, March 21, 1953.

### Intrapartum Uterine Rupture

An African surgeon describes 4 cases in which the uterus ruptured during childbirth in African women. In 1 case death occurred before treatment could be given. The other 3 cases were in their third, sixth, and eleventh pregnancies, respectively. In each case after treatment for shock, a laparotomy revealed that the uterus had ruptured and the fetus was in the peritoneal cavity. In each case, after removal of the fetus, a subtotal hysterectomy was performed and after a stormy convalescence the patients recovered. The dystocias apparently were due to the excessive size of the fetuses.—*Brit. M.J.*, Feb. 14, 1953.

[Three of 4 ruptured uterus cases seen in cows were breech presentations.—Ed.]

# NUTRITION

## Australian Pasture Problems

In Australia, several diseases of sheep or cattle are either caused by, or are closely associated with, conditions which have resulted from their improved pasture program:

- 1) Scouring is common on lush pastures.
- 2) Bloat in ruminants causes many deaths, especially on good legume pasture.
- 3) Enterotoxemia in lambs often occurs when good pastures (a) stimulate the ewe to the production of abundant milk, and (b) encourage the lambs to gorge also on the palatable plant growth.

4) Helminthiasis is increased not by the improved feed but because a greater number of sheep are pastured in the same area.

5) Grass tetany occasionally occurs in cattle shortly after they are turned on pasture. There is usually a drop in the blood magnesium but, why, has not been determined.

6) So-called staggers in sheep and cattle on perennial rye grass has occurred for years. It occurs in the fall after rains but before new growth is obvious; removal from the pasture usually brings quick recoveries. A more serious form of staggers, possibly different from the above, can be prevented by feeding cobalt.

7) Photosensitization in either sheep or cattle occurs in the fall after the rains start, particularly after a warm, dry summer. A rapid growth of perennial rye grass apparently produces a hepatotoxic icterogenic substance, the nature of which has not been determined.

8) Nitrite poisoning occurs when there is much nitrogen in the soil and the plants, especially green oats and wheat, have a high nitrate content. The nitrates are converted to nitrites in the rumen.

9) Rickets in lambs is a real hazard in some regions. Green oats or Italian rye grass apparently produce a rachitogenic factor.

10) The infertility-dystocia-prolapse complex of sheep occurs when grazing on subterranean clover. It caused heavy losses in western Australia in the 1940-1950 period. In wethers it produced changes in

the bulbo-urethral glands. In ewes, prolapse of the vagina, dystocia, and infertility reduced lamb production 90 per cent in many flocks. During the war period, less superphosphate was used as a fertilizer and this seemed to increase the production of the troublemaking proestrogen, called genistein, in the subterranean clover.

11) Chronic copper poisoning in sheep is another complex condition apparently due to the effects of some plants, such as subterranean clover, which favor an abnormally high storage of copper in the liver.—*Austral. Vet. J.*, Jan., 1953.

## Feeding Antibiotics to Fattening Hogs

A trial in progress in England involves 400 pigs at four centers. Results reported by W. K. Slater, of the Agricultural Research Council (*Vet. Rec.*, Dec. 6, 1952), indicate that adding procaine penicillin or aureomycin to the ration has shortened the feeding period by about 10 per cent and improved the efficiency of feed conversion by about 5 per cent.

## Vitamin A and Hyperkeratosis

It is known that the vitamin A content of blood plasma declines rapidly when an animal is fed agents which cause hyperkeratosis. This vitamin A blood value actually declines more rapidly than if the animal were on a vitamin A-deficient ration, whereas the carotene-blood levels dropped more slowly than when on such a ration.

This is of great interest to nutritionists. Up to this time the only antivitamin A active substance known was vanadium oxide. Chlorinated naphthalenes which produced hyperkeratosis in sheep and several laboratory animals, as well as in cattle, are also poisonous to man. They cause an occupational rash (cable rash, cable itch) and, often, an acute yellow atrophy of the liver. It is emphasized that causes for hyperkeratosis, other than the chlorinated naphthalenes, may very likely be discovered.—*Nutr. Rev.*, April, 1953.

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# EDITORIAL

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## Poison Hazards of the Hungry

The news of widespread chronic chemical poisoning of cattle in the Texas and southwest drought region coming so soon after a similar incident, but with a different poison, in the Montana-North Dakota region a year ago gives us reason to pause for reflection.

History is replete with man's efforts to starve or otherwise induce animals (wild carnivora, rodents, insects, etc.) into eating poisoned food. Currently, too much history is being recorded where man finds he has inadvertently poisoned his valued animals after they had been starved contrary to his design.

### MISFORTUNES COMPOUNDED

Both of the above misfortunes were the result of native feed shortages due to droughts, but the tragic losses occurred only when the emergency feed provided proved to be poisonous. Because cattlemen had found it necessary to buy whatever feed was available to "winter" their herds, local feed manufacturers were given an unusual volume of business, pushing to capacity a few plants which, unwittingly and unfortunately, were producing toxic feeds.

In the Montana region a year ago, some of the oil meal concentrate used as emergency feed was trichloroethylene-extracted soybean oil meal (TESOM). This particular type of soybean meal was considered poisonous in Scotland as early as 1916. It had been responsible for cattle deaths in Iowa in 1947-1948<sup>1</sup> and in other states later. However, it was not experimentally proved until 1952<sup>2</sup> that, somehow during processing, a poison is created which causes a fatal aplastic anemia in several species but chiefly in cattle. The Montana Livestock Sanitary Board (*Montana Ann. Rep.*, 1952) reports that about 300 cattle died

from TESOM poisoning in that state in the late winter and spring of 1952.

In the Texas region, the killer is hyperkeratosis. Accurate reports on the extent of the losses there may not be available for some time, since they have probably not yet ended. While some of the afflicted cattle probably are suffering only from avitaminosis A or from simple malnutrition, it is reported that cottonseed pellets of one producer were poisonous. Presumably, the pellets were contaminated with a high compression lubricant containing poisonous chlorinated naphthalene<sup>3</sup> which had leaked from the machinery. Other outbreaks elsewhere are also thought to be due to such feed contaminants. Thus, in both of these "epizootics" a catastrophe of nature was compounded by an error of man.

However, lest an unfair charge be leveled at the vast and worthy feed manufacturing industry, we hasten to state that these are exceptions and that corrections have been, or are being, made as quickly as possible. The TESOM variety had never represented more than about 1 per cent of all the soybean oil meal produced and it has been discontinued. Also, since hyperkeratosis was found to be caused by the chlorinated naphthalenes in high compression lubricants, their use, where they may contaminate animals or their food, is being curbed.

### NATURE'S ONE, TWO PUNCH

Somewhat similar tragedies occur frequently in other areas following drought periods when pastures are poor. Such poisonings, however, usually differ from the above in the following respects: they occur most often in the summer or fall; only natural feeds are usually involved; the poisonings are usually acute and, therefore, quickly controlled; and the victims may respond remarkably to treatment.

<sup>1</sup>TESOM Withdrawn from Market (editorial) J.A.V.M.A. (Aug., 1952): 107.

<sup>2</sup>Pritchard, W. R., Rehfeld, C. E., and Sautter, J. H.: Aplastic Anemia of Cattle with Ingestion of Trichloroethylene-Extracted Soybean Oil Meal. I. Clinical and Laboratory Investigation of Field Cases. J.A.V.M.A., 121, (July, 1952):1-8.

<sup>3</sup>Sikes, Dennis, Wise, J. C., and Bridges, Mary E.: The Experimental Production of "X Disease" (Hyperkeratosis) in Cattle with Chlorinated Naphthalenes and Petroleum Products. J.A.V.M.A., 121, (Nov., 1952): 337-344.

Great losses have occurred in serious drought years, as in 1934 and 1936, when in parts of the cornbelt, poor crops were supplemented by planting drought-resistant sudan grass or some variety of cane. These wide-leaved grass type plants, when wilted by drought, frost, or other injury, are potent sources of hydrocyanic (prussic) acid. They are usually the greenest crop on the farm so animals are sorely tempted to break through pasture fences to appease their hunger, often with tragic results. In some cases, the victims if not treated may be dead twenty minutes later (see case report below). The number of such losses probably has never been estimated but they have been extensive.

Also, almost every year when pastures get poor, cattle will break out to gorge themselves on more common feeds, such as corn in the immature ear stage, thus causing an intoxication for which no specific is known and which is often fatal.

#### THE PRICE OF PROGRESS

In the above tragedies, natural failures played an important role. However, misfortunes have sometimes been entirely man's own doing. For instance, "fright disease" in dogs, which was common ten to thirty years ago, apparently was due to feeding the innocent young victims bread made with "improved" flour. This flour had been superwhitened with a bleaching agent which proved to be poisonous to the canine species but fortunately not to man. Part of this flour processing was justified as improving its keeping quality, but we fear much of it was merely to appease the esthetic whims of those who probably would also believe a bath is superior if taken in a blue or pink tub. It was significant that only flour from North America poisoned dogs. The concomitant absurdity is that the super refining had not only added a toxic agent to bread but had removed much of the vitamin content, so that the latter had to be added to make the white flour nutritionally equal to its non-refined predecessor. We even dare to ask, will the present chlorophyll fad seem equally absurd eventually?

Other instances of poisoning have occurred when chemicals have been intentionally or accidentally added to food. One classical example is the poisoning that all too frequently results when salt is careless-

ly added to pig feed. Of greater concern is the vastly increased practice, in recent years, of giving medication to animals through their food or water supply. And even more amazing is the recent yen for feeding or injecting parenterally insecticides and parasiticides, experiments with which are now under way.

#### THE HUMAN FACTOR

If ample research is done on the species toxicity of any drug and directions for its use are carefully followed, cases of toxic injury should be limited to the few animals which happen to have an idiosyncrasy for that drug. However, as long as a human element is involved, errors may occasionally be disastrous. If an error is made in administering such agents, only the few animals involved would be affected. On the other hand, if an error is made at the factory, such as adding the wrong ingredient or too much of the right one, the effect could be greatly multiplied and widespread. The same could be true if medicated feed prepared for one species is fed to the wrong species.

One such incident has occurred at least three times at different places in the past two years. A potent anticoccidial agent, for use in poultry feed, became a contaminant of dog food when the mixing machine used for both feeds was not sufficiently cleaned between operations. As a result, in each case several dogs were poisoned and became paralyzed. Producers have been warned to avoid such methods in the future.

Animals, especially swine, were sometimes poisoned in past years when the popularizing of "self-feeding," and of supplements for farm animals, provided an avenue for many amateurs and easy profit artists to concoct and peddle such mixtures. This was especially true when "medicated stock foods" and remedies were in vogue. The ingredients claimed usually included several of the most undecipherable names available, from *asafoetida* to *zingiber*, as if the object was more to overwhelm the buyer than to benefit his livestock.

Livestock feeds can also be contaminated by deadly infectious microorganisms which are often more dangerous than poisons. It could be a rapidly spreading infection such as the current vesicular exanthema epizootic, the virus of which may contaminate garbage, or it could be a more sporadic,

long-lasting infection such as the anthrax epizootic of a year ago when spore-contaminated bone meal was used in mineral mixtures.

#### THE BRIGHTER SIDE

Truly there is much in this rapidly changing era of synthetics for a pessimist to dwell on. A more optimistic view may then be in order. Recently an authority from the U.S.D.A.<sup>4</sup> was quoted as saying "Today we have safer insecticides . . . than we had ten years ago." [Synthetic products have replaced the more toxic arsenicals, fluorides, and cyanides.] "It is better . . . to use a chemical with a calculated health risk than to deny the protection this chemical can give against disease carriers" [and pests]. "No less than 5 million lives have been saved . . . and 100 million illnesses . . . prevented, through the use of DDT . . . yet not one death (excluding accidental deaths) or serious illness has been caused among people exposed" [while handling DDT].

Since they can not be controlled, natural catastrophes will continue but improvement is possible for man and his methods. Let us hope our livestock in the future may be spared the sufferings, and their owners the losses, incurred by misfortunes such as have been exemplified by our past errors.

#### CASE REPORT

**Cane (Hydrocyanic Acid) Poisoning.**—On June 21, 1936, at about 10 a.m., farmer B noticed that his herd of 37 Guernsey cows was in the cane field. A call came immediately and, having had similar cases a few days before, we were set for just such an emergency. It was probably the fastest drive that car ever made—12 miles in about ten minutes on country roads, but there was much at stake. Upon arrival, 10 cows were dead. Two were in a coma and, thinking it might be bloat, a neighbor was manipulating a knife through the left flank of each. Two other cows were down in the cane field and 3 had dropped along the road while the herd was being driven to the barnyard. Each of these cows was given about 250 cc. of 20 per cent sodium thiosulfate solution intravenously. Four others, still on their feet but toxic, were likewise treated. In less than half an hour all were acting normal and every one of those 11 cows were in the milk line that evening, eating and milking as

usual. The equipment used consisted of two 500-cc. serum bottles and a gravitation intravenous outfit. While one bottle was being emptied, 100 cc. of the thiosulfate crystals were poured into the other which was then filled with water from a jug (the farm well being dry) and well agitated until needed.—W.A.A.

#### The Zoonoses

An editorial in the *American Journal of Public Health* (April, 1953) states that the infections which may be spread from animals to man are increasing in relative importance because of the notable reduction in the diseases which are spread from man to man. This was indicated by the creation of an Expert Group on Zoonoses, under the auspices of the World Health Organization and the Food and Agricultural Organization in 1950. Drs. B. D. Blood and J. H. Steele represent the United States.

At their first meeting in Geneva, December, 1950, the committee prepared a list of 86 diseases which are transmissible between other vertebrates and man. Of this list, 20 were virus diseases, 20 bacterial, ten nematode, ten trematode, nine cestode, eight protozoal, seven rickettsial, and two were fungus diseases. The ten warranting the most intensive study were bilharziasis, equine encephalitis, hydatidosis, leishmaniasis, leptospirosis, psittacosis, Q fever, rabies, trichinosis, and tularemia.

At a conference in Vienna in November, 1952, the diseases considered as Europe's chief problems were: bovine tuberculosis, brucellosis (said to have cost France \$100,000,000 a year), leptospirosis, Q fever, and rabies. At the AVMA meeting in 1952, the six diseases which received primary attention were anthrax, canine hepatitis, foot-and-mouth disease, leptospirosis, rabies, and salmonellosis in poultry. Leptospirosis and rabies appear in all of these priority lists.

It was gratifying to note that a substantial number of veterinarians are registering for the M.P.H. degree in our schools of public health (21 candidates in six schools last June.) Veterinarians should feel at home in this work because, from the start, they have been trained to handle group diseases and malnutrition, whereas the physician and dentist have been trained chiefly to treat individual cases.

<sup>4</sup>Dr. E. F. Knipling in charge of the Division of Insects Affecting Man and Animals quoted in the "Du Pont Agric. News," March-April, 1953.

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# CURRENT LITERATURE

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## ABSTRACTS

### Liver Biopsy in Cattle

A method of collecting samples of liver tissue from a steer is described. The biopsy instrument used is of larger dimensions than previously used by other workers. The site of puncture is located between the eleventh and twelfth ribs on the right side, and the trocar and cannula are entered into the dorsum of the liver. After piercing the liver capsule, the trocar is withdrawn and a syringe is attached to the cannula. A negative pressure is established and the instrument is advanced 6 or 7 cm. into the liver; then the core of tissue is freed with slight movement of the tip of the cannula. The liver samples obtained showed less distortion than samples obtained with smaller bored instruments. The larger biopsy instrument caused no undue discomfort to the animal and the procedure may be repeated through the same site of puncture without harmful effect.—[Lee Seghetti and H. Marsh: *Liver Biopsy in Cattle*. *Am. J. Vet. Res.*, 14, (1953): 9-11.]

### Curare as an Adjunct to Chloral Hydrate Anesthesia in the Horse

A total of 117 experiments were made on 10 horses for evaluation of curare as an adjunct to chloral hydrate anesthesia. Curare was injected intravenously in conjunction with 3, 4, and 5 Gm. of chloral hydrate per 100 lb. of body weight. Doses of curare, up to and including the established toxic doses, failed to abolish spinal reflex activity when used following chloral hydrate administration. The results obtained in this study indicate that curare has no potential value as an adjunct to chloral hydrate anesthesia.—[N. H. Booth and A. D. Rankin: *Studies on the Pharmacodynamics of Curare in the Horse. II. Curare as an Adjunct to Chloral Hydrate Anesthesia*. *Am. J. Vet. Res.*, 14, (1953): 56-59.]

### The Developing Chicken Embryo and Radioactive Phosphorus

Radioactive phosphorus ( $P^{32}$ ) was injected into the yolk sacs of developing chicken embryos on the ninth day of incubation and selected portions of the embryos were surveyed for total activity at periods from sixty-six to 251 hours after the injection and compared with growth of the structures. A very rapid uptake of the injected inorganic phosphorus by the embryo was noted (48% at 66 hr.). On a unit gram basis, the body, liver, and chorioallantoic membrane decreased in concentration as growth progressed. On the nine-

teenth day, approximately 100 per cent of the dose could be accounted for by the body and yolk sac.—[Logan M. Julian: *Studies on the Developing Chicken Embryo with the Use of Radioactive Phosphorus. I. Uptake of  $P^{32}$  by the Body and Selected Tissues of the Chicken Embryo Between the Ninth and Nineteenth Day of Incubation*. *Am. J. Vet. Res.*, 14, (1953): 129-136.]

### Collecting Urine from Steers

A simple, inexpensive method is described for collecting 24-hour urine samples from steer calves, which does not necessitate a harness and bag on the animal. A raised platform supporting iron floor grates is built in a stallion stall to accommodate a special collecting pan. The urine passes through the fine mesh screen into the covered collection pan. Urine specimens collected in this manner contained minimal amounts of extraneous matter which did not interfere with routine chemical analysis.—[Lee Seghetti: *A Simple Apparatus for Collecting Urine from Steers*. *Am. J. Vet. Res.*, 14, (1953): 28-29.]

### Water Consumption and the Development of Urinary Calculi in Steers

Twelve steer calves weighing 438 lb. at the beginning of the experiment were held for three months on a daily water intake of 6 quarts per head, which was found to be the minimum daily water intake compatible with life. Weekly, 24-hour urine samples were taken from each steer. The only changes in the urine were decreased volume, increased specific gravity, and a slight increase in pH. There was no evidence of stone formation.—[K. F. Swingle and H. Marsh: *The Relation of Limited Water Consumption to the Development of Urinary Calculi in Steers*. *Am. J. Vet. Res.*, 14 (1953): 16-18.]

### Electron Microscopic Study of the Virus of Rabies

Studies by the electron microscope of brains of hamsters infected with rabies virus, strain V308, showed the virus to vary from 100 to 120 m $\mu$  in diameter. These bodies could not be demonstrated in concentrated normal hamster brains subjected to the same procedure of concentration and examination. The concentrated virus-bearing hamster brain material, upon being injected into normal hamsters intracerebrally, produced furious rabies. The concentrated material from normal hamster brains injected intracerebrally into ham-

sters produced no evidence of rabies. The virus particles demonstrated resemble the internal structures previously seen in Negri bodies by electron microscopy.—[R. L. Reagan, W. C. Day, Marilyn P. Harmon, and A. L. Brueckner: *Electron Microscopic Study of the Virus of Rabies*. *Am. J. Vet. Res.*, 14, (1953): 111-112.]

### Life History of *Eimeria Arloingi* in Sheep

A study was made on the endogenous phase of the life history of the coccidian parasite, *Eimeria arloingi*, in domestic sheep raised free of parasites. The small intestine was the seat of infection. The time from inoculation to the shedding of the first oöcysts was twenty days. Schizonts developed in the central lacteals of the villi, utilizing endothelial cells as host cells. Mature merozoites were produced about thirteen days after inoculation. There was no evidence that the merozoites produced another generation of schizonts. Sexual stages utilized epithelial cells for their development. They tended to invade groups of neighboring cells, often those over one or more villi, which became so enlarged that they could be easily discerned with the naked eye.—[John C. Lotze: *Life History of the Coccidian Parasite, Eimeria Arloingi, in Domestic Sheep*. *Am. J. Vet. Res.*, 14, (1953): 86-95.]

### The Pharmacodynamics of Curare in the Horse

The action of curare on several physiological activities was observed in 10 horses. A total of 39 experiments was made. The maximum safe intravenous dose in the horse appears to be  $\frac{3}{8}$  unit per pound of body weight. This dose, however, was adequate to paralyze the limb muscles of only 5 of the animals. Intravenous doses of  $\frac{1}{2}$  unit per pound of body weight were sufficient to paralyze each animal tested. Spinal reflex activity was not abolished by curare. This was observed even after paralysis of the intercostal muscles and diaphragm. Blood pressure studies made on 5 of the 10 horses showed that curare had no direct effect on blood pressure. The only effects observed on the blood pressure were due to the asphyxiation that followed paralysis of the respiratory musculature.—[N. H. Booth and A. D. Rankin: *Studies of the Pharmacodynamics of Curare in the Horse. I. Dosage and Physiological Activity of D-Tubocurarine Chloride*. *Am. J. Vet. Res.*, 14, (1953): 51-55.]

### An Isolated Rumen Pouch

The surgical procedure for establishing an isolated rumen pouch in the goat is described. Its possibilities for studying physiological and pharmacological problems of this organ are discussed.—[Roy E. Nichols: *An Isolated Rumen Pouch*. *Am. J. Vet. Res.*, 14, (1953): 37-39.]

## FOREIGN ABSTRACTS

### Veterinary Colleges Behind the Iron Curtain

The 2,115 graduates of the 17 institutions listed below have completed a five-year course and have passed the examination of the Ministry of Agriculture of the U.S.S.R. They receive a veterinary practitioner's diploma. This is the highest level of veterinary education in the U.S.S.R., except for graduate research degrees. The term "zoöveterynary" used in the titles of many of the institutions means that instruction is given in animal husbandry (zoötechny) as well as veterinary medicine.

Institution	No. of Graduates (1952)
Moscow Veterinary Academy	220
Omsk Veterinary Institute, Western Siberia	200
Leningrad Veterinary Institute	196
Kharkov Veterinary Institute, Ukraine	170
Alma-Ata Zoöveterynary Institute, Kazak Republic	153
Saratov Zoöveterynary Institute, Volga Region	145
Kiev Veterinary Institute, Ukraine	139
Kazan Veterinary Institute, Tatar Republic	111
Lwow Veterinary Institute, Poland	114
Vitebsk Veterinary Institute, White Russia	106
Novocherkassk Zoöveterynary Institute, North Caucasus	102
Erivan Zoöveterynary Institute, Armenia	91
Georgian Zoöveterynary Institute	88
Voronezh Zoöveterynary Institute, Euro- pean Russia	86
Troitsk Veterinary Institute, Southern Ural Region	80
Buryat-Mongol Zoöveterynary Institute, Eastern Siberia	61
Litovsk Veterinary Academy, Lithuania	53

Students were admitted for the first year course at the new Smolensk (European Russia) and Semipalatinsk (Kazak Republic) institutes.—[G. A. Gatlikh: *The Numbers of Admissions and Graduations of the Veterinary Colleges and Faculties in 1952*. *Veterinariya (Moscow)*, 29, (Nov., 1952): 63.]—R. E. H.

### Bovine Abortion Associated with *Erysipelothrix (Listeria) Monocytogenes*

The authors describe 2 cases of *Listeria* abortions in first calf heifers, the first in an imported American Holstein-Friesian which aborted a 7-month fetus, and the second in a native heifer which aborted a 6-month fetus. No apparent pathological changes were noted in the aborted fetuses. Laboratory procedures proved the causative organism to be *Listeria monocytogenes*. The

characteristics resembled descriptions of this organism found in the literature from other countries. Two and one-half months after the abortion, the American heifer was slaughtered. Histological changes were noted in the uterus and spleen, but not in the central nervous system. *Listeria monocytogenes* was recovered from the ovary on the side where there pregnancy had occurred. The second heifer remained in good condition, and was retained in the herd. The authors suggest that the disease may be more widespread than had been suspected, and its danger to other farm animals as well as man is stressed.—[M. L. Levi, A. Shamir, G. Neeman, and T. Nobel: *Two Cases of Bovine Abortion Associated with Erysipelothrix (Listeria) Monocytogenes*. *Refuah Vet.*, 9, Oct., 1952.]—M.E.

#### Conception Rate of Cows After Insemination at Different Stages of Heat

The period of heat was divided into four parts according to stage of heat. Only cows which did not need more than four inseminations for conception were considered in these statistics. Cows were inseminated only once during the heat period. The results suggest that inseminations made with semen from normal bulls give highest rates of conception when made in the middle of the heat period. Insemination made very early and at the end of the heat period, or later, lowered the conception rate.—[H. Schindler and R. Volcani: *Conception Rate of Cows After Insemination of Different Stages of Heat*. *Refuah Vet.*, 9, Oct., 1952.]—M.E.

#### Postpartum Acetonemia in Cattle

The author investigated postpartum acetonemia as it often occurred in his practice during the winter. Whenever possible, those animals were chosen which suffered from primary acetonemia. On several occasions, and especially before and after treatment, the blood content of acetone bodies and glucose were determined. Included with acetone bodies is the iso-acetone which was demonstrated in several body fluids by Robertson. The author expects that other substances such as butyl alcohols will also occur during this disease.

Choline chloride administered intravenously in quantities of 5 to 10 Gm. induced recovery in some cases but no effect was seen with this substance after oral administration. Intravenous administration of pure choline is too dangerous. It may cause the appearance of muscular tremors and even of parietic states. Potassium chlorate, and also sodium chlorate, appeared to be beneficial against acetonemia. Of 63 cases studied, 52 per cent recovered; 29 per cent recovered only partially or relapsed after temporary benefit; 19 per cent improved little or not at all. The administered dose was 30 to 35 Gm. twice daily *per os* for three days. Potassium chloride had no influence on the disease if it was administered *per os*

in a dose equivalent to that of potassium chlorate.

Potassium lactate in a dose which amounted to half that fixed by Seekles for ammonium lactate had no favorable influence either. Potassium ions *per os* are not able to effect recovery.

Sulfanilamide in a dose of 100 Gm. per day for three days caused deterioration in one case, so that it may be possible that sulfanilamide during the first period after parturition may help produce acetomenia. Methylene blue in a dose of 4 to 8 Gm. per day in 2 per cent solution intravenously apparently resulted in the recovery of two light cases of acetonemia, but a third patient did not recover and a fourth succumbed with symptoms of general intoxication, probably because of the decreased detoxicating power of the liver during acetonemia. Chloral hydrate appeared to cure acetonemia in 10 of 13 treated animals, while 3 at first improved and then relapsed. The dose used was 40 Gm. per day for three to four days.

Exercising 10 acetonemia patients for thirty to sixty minutes caused an average decrease of the acetone body content of the blood from 28.7 mg. to 22.4 mg. per 100 cc. of blood. The glucose content in that time increased from an average of 30 mg. to 50 mg. per 100 cc. of blood.

These facts agree with the experience in the Netherlands that developing acetonemia cases quickly recover in the pasture due to exercise, so the disease is seldom seen during the summer. As a treatment for acetonemia, the author recommends walking the animal for thirty to sixty minutes a day for three days and also administering 60 to 70 Gm. of potassium or sodium chlorate. By doing this, he expects a high percentage of recoveries and few relapsing patients. As to the etiology of acetonemia postpartum, he states that the alimentary form of this disease, as distinguished by Seekles, must be considered important and great value must be attached to feeding silage containing large quantities of butyric acid. The hormonal form of the disease, in which the hypophysis-adrenal cortex system plays a great part in the etiology, has also occurred in the author's practice.—[D. Talsma: *Postpartum Acetonemia in Cattle*. *Tijdschr. voor Diergeneesk.*, 77, (1952): 881-889.]—L.V.E.

#### Inducing Lactation with Hormones

Artificial lactation was induced in 33 nonlactating heifers by subcutaneous implanting of pellets of diethylstilbestrol, using one single dose of 800 mg. of hormones divided in eight pellets of 100 mg. each.

A favorable change in general condition and a significant development of the udders was observed at the beginning of treatment. All showed symptoms of nymphomania to a variable extent, with crepitations in the pelvis, elevation of the sacral bone, and a relaxation of the sacroiliac ligament. Three cows at the beginning of pregnancy aborted a few days after implantation. The

blood-calcium level of the implanted cows showed a maximum of 13.5 mg./100 cc. of blood and a minimum of 9.5 mg. (11.48 mg. average).

Milking was started ten days after the implantation. At first, a colostrum-like secretion was obtained but, in a varying time, it turned into milk of normal appearance.

The heifers were divided into three groups. The first group of 12 was studied 165 to 452 days. Their pellets were removed 118 to 271 days after implanting. They were surrounded by a capsule of connective tissue with abundant vessels and leukocytic elements. The quantity of estrogen absorbed varied from 1.2 to 3.3 mg. daily, with a total absorption between 200 and 450 mg. The degree of absorption had no relation to the duration of the treatment nor to the quantity of milk obtained.

A few days after removal of the pellets, the symptoms of nymphomania disappeared; the crepitations disappeared twenty to thirty days later, but the deformation of the pelvis persisted about 120 days. The amount of milk increased remarkably after the removal of the pellets. The total milk production of the animals varied from 831.6 to 3,745 liters. The total production of the 12 animals was 29,865 liters.

The second group consisted of 13 heifers controlled for fifty to 120 days after the implantation. Pellets were not removed from this group. The total production of the 13 animals was 4,431 liters.

The third group composed of 8 heifers was controlled for a limited time. The amount of milk varied between a few drops of colostrum to 6 liters per day. Because of these deficient results, this group was sold.

Because of the limited experiments and because some of the animals happened to be pregnant, it can not be positively stated that the implantation of diethylstilbestrol is a convenient method for obtaining milk from nonlactating heifers.—[M. Perez Matus and E. Ponce Pacheco: *Inducing Lactation with Hormones. Zootech.*, 1, (Sept.-Oct., 1952): 18.]—G.T.E.

#### Cervical Mucus for Early Diagnosis of Pregnancy and Endocrine Changes

During estrus, unstained smears of cervical mucus have innumerable fernlike structures. These disappear during the lutein phase of the cycle. They can not be seen during pregnancy. Photomicrographs illustrate the appearance of unstained smears of cervical mucus during estrus and also eleven and thirteen days later. Two photomicrographs show the appearance of cervical mucus twenty-one and eighty-six days after conception. Further studies are being made to learn whether the characteristic appearance of cervical mucus may be useful in the early diagnosis of pregnancy and in sterility due to endocrine disturbances.—[O. Garm and O. Skjerven: *Studies on Cervical Mucus for Early Diagnosis of Pregnancy and*

*Endocrine Changes in the Reproductive Cycle in Domestic Animals. Nord. Vet.-med.*, 4, (Nov., 1952): 1098-1103.]—A.G.K.

#### Blood Coagulability of Horses

The technique for determining coagulation time, clot opacity, and prothrombin time for normal horses and for those with lymphangitis are discussed in detail and the results presented in tables and "coagelgrams" (Nygaard). The coagulation time for normal horses was found to be thirteen minutes. For horses with lymphangitis, there was variation during the course of the disease with a tendency toward lower coagulation time, but the differences were not great. It was found that increased opacity of clot was associated with increased sedimentation rate. In normal blood, the prothrombin time (Quick and Lehmann) was about twenty and one half seconds while, in the case of horses with the disease, it appeared to be greater than twenty-six seconds. There was some evidence of a slight decrease in the number of thrombocytes and also a reduction in clot retraction.—[Gunnar Tufvesson: *Lymphangitis in Horses. IV. A Study of the Blood Coagulability. Nord. Vet.-med.*, 4, (Nov., 1952): 1046-1060.]—A.G.K.

#### An Influenza-like Disease of Swine in Sweden

A contagious, chronic bronchopneumonia of swine has been recognized in Sweden for many years. It resembles the German *ferkelgrippe* and the American swine influenza of Shope. There is some question regarding the identity of the disease and studies were made to compare it with swine influenza. In order to prevent any cross infection, the two diseases were studied in different places. The swine influenza virus produced visible pulmonary lesions in swine as early as two days after infection by the intranasal route. The virus could be isolated in embryonating eggs up to five days after infection. Antibodies appeared in swine infected with the influenza virus, which neutralized the influenza virus but not the bronchopneumonia virus. The agent of bronchopneumonia could be transmitted serially to swine but the disease was of longer duration than in the case of swine influenza. The agent persisted in the lungs for at least fourteen days after infection, as determined by transmission experiments in swine. It could not be isolated in embryonating eggs. Serum from infected swine did not neutralize homologous virus, nor did it neutralize the influenza virus. Histologically, the lesions of the bronchopneumonia had a more purulent exudate than those of swine influenza. It was concluded that the chronic bronchopneumonia of swine as seen in Sweden is not the same as Shope's swine influenza. The term contagious or enzootic virus pneumonia of swine should be used instead of calling it swine influenza.—[A. Hjarre, Z. Dinter, and K. Bakos: *Comparative Studies on an Influenza-like Disease of Swine*

in Sweden and Shope's Swine Influenza. *Nord. Vet.-med.*, 4, (Nov., 1952):1025-1045.]—A.G.K.

### Intoxication with Dicoumarin and Its Derivatives

In preliminary experiments, it was found that for the Norwegian rat a daily intake of dicoumarin of 20.0 to 39.7 mg. per kilogram of body weight failed to kill. Using warfarin on the brown rat, it was found that an average daily intake of 0.8 to 1.13 mg./kg. killed rats in an average of 5.8 days. Higher doses were not more effective. Some evidence was obtained that the brown rat could, in some instances, taste warfarin and would refuse to eat food containing it. In most rats given warfarin, there were hemorrhages of varying degree but, in some, the hemorrhages were so slight that the blood loss could not account for death. Extensive liver degeneration was commonly seen. Myocardial degeneration and valvular endocarditis involving the mitral valve was also considered to be important in the pathogenesis of warfarin toxicity in brown rats. Warfarin not only causes prolongation of the prothrombin time but also causes serious degenerative and inflammatory changes in certain vital organs such as the liver and heart. Warfarin is dangerous to other animals and should be used with caution. It may be used for the control of rats as a supplement to other procedures.—[Aage Dyssegard: *Intoxication with Dicoumarin and Its Derivatives*. *Nord. Vet.-med.*, 4, (Oct., 1952): 962-982.]—A. G. K.

### Follicular Cysts, Hyperestrogenism, and the Pathogenesis of Pyometra in Dogs

\* In old dogs, inhibition of ovulation leads to cyst formation and hyperestrogenism. The leukocyte emigration from the vaginal mucosa, which may be a protective mechanism, is inhibited by the hyperestrogenism. The corpus luteum inhibits the uterus-contracting effect of the pituitary gland and thus promotes retention of secretory and exudative products in the uterus. This series of events leads to pyometra.—[Stian Erichsen: *Follicular Cysts, Hyperestrogenism and the Pathogenesis of Pyometra in Dogs*. *Nord. Vet.-med.*, 4, (Nov., 1952): 1078-1089.]—A.G.K.

### Synthetic Estrogens and Hormonal Castration

This is a review of the literature on the castration of domestic animals by means of synthetic estrogens. Castration of roosters, goats, boars, and stallions is mentioned. In the latter animals, it has been used to decrease libido in trotters. There is some danger that estrogens may be retained in the tissue of food animals. For this reason, hormonal castration of roosters is not allowed. One should also consider the danger that may arise from eating meat that contains a high concentration of the estrogen at the site of in-

jection.—[Odd Skjerven: *Synthetic Estrogens in Veterinary Medicine. III. Synthetic Estrogens and Hormonal Castration*. *Nord. Vet.-med.*, 4, (Oct., 1952): 1010-1015.]—A. G. K.

### Roentgenographic Diagnosis of Pneumonia in Dogs

This paper demonstrates, by means of 19 photographs, the roentgenographic appearance of the lungs of normal dogs and those with pneumonia. A roentgenograph of the thorax of a normal dog reveals no distinct borders of the lobes but when there is consolidation, the interlobar border can be visualized. Normally branching vessels can be seen, but when the pulmonary tissue becomes consolidated, the bronchi become noticeable which is important when small areas are involved.—[Sten-Erik Olsson: *Observations on the Roentgenographic Diagnosis of Pneumonia in Dogs*. *Nord. Vet.-med.*, 4, (Oct., 1952): 983-992.]—A. G. K.

### Solanin Influence in Cattle and Sheep Fed Potato Plants

The herbaceous part of the potato plant from silos may be fed in quantities of 10 to 20 lb. Some cows, however, showed swollen legs and skin eruptions, and in severe cases even emaciation, loss of hair, reduction in milk flow, digestive disturbances and paralysis.

In the experiments with sheep, acceleration of the heart, reduction of hemoglobin, increase of red cells, leukocytosis, and asphyxia terminating fatally have been observed.—[H. König: *Examination of the Solanin Influence in Cattle and Sheep in Connection with Potato Plant Feeding*. *Schweiz. Archiv f. Tierbeilk.*, 95., (1953): 97.]—F.K.

### Continuous Intravenous Infusion in Large Domestic Animals

A brief history is presented regarding the use of intravenous therapy in animals. (Of interest is the statement that a Spanish veterinarian, de la Reyna, had, in 1564, been aware of the circulation of blood thus antedating William Harvey.) Intravenous therapy is indicated in large animals in cases of tetanus. In such cases, magnesium sulfate and barbiturates and also glucose were administered by this route. In acetoneemia, glucose may be administered in doses of 5 liters of a 10 per cent solution over a twelve-hour period. In addition, in cases of certain deficiency diseases, one may administer Ca, Mg, P, or K by continuous intravenous infusion. The technique will be useful in experimental pharmacology and physiology. Ten figures with English legends are used to illustrate the instruments and the use of the ap-

paratus on cows and horses standing in a stall. A cannula or a polyethylene tube is placed in the jugular vein and immobilized. A long plastic tubing conducts the solution from an overhanging bottle. The rate of flow is maintained by a drip chamber below which is an adjustable clamp. The long tubing may be fastened in such a manner as to permit the animal sufficient movement for eating and drinking. The method has been used in 60 cases.—[W. Hallgren and G. Björck: *Use of Continuous Intravenous Infusion in Large Domestic Animals. Technique and Indications.* Nord. Vet.-med., 5, (Jan., 1953): 1-32]—A.G.K.

### Effect of Antibiotics in Milk

The presence in milk of antibiotics used in the treatment of mastitis is of concern to the dairy industry since they interfere with the action of starters. It was found that as little as 0.02 µg. of aureomycin, 0.20 of chloromycetin, 0.04 of streptomycin, and 0.01 of terramycin per milliliter of milk would cause some inhibition of acid formation. It was also found that the inhibitory action of these antibiotics was not destroyed by pasteurization. Experiments were done on milk from 2 cows given extramammary infusion of 200 mg. of the antibiotics mentioned above and 50,000 units of penicillin. Milk obtained at the first milking eight hours after treatment with aureomycin caused inhibition of acid formation when as little as 2 per cent was added to normal milk. Following streptomycin, penicillin, or chloromycetin infusion, the first milk in concentration of 5 per cent, 10 per cent, and 40 per cent, respectively, inhibited acid formation. The amount of antibiotic decreased with each successive milking. It was recommended that milk from treated cows should not be used until two days after treatment with chloromycetin, three days after streptomycin or terramycin, and four days after aureomycin.—[Anker Jul Overby: *The Effect of Various Antibiotics in Milk Following Intramammary Infusion.* Nord. Vet.-med., 4, (Oct., 1952): 993-1004.]—A. G. K.

## BOOKS AND REPORTS

### Veterinary Food Inspection

This new edition is a condensed and synoptic description of the control measures exercised over the processing of the most important foods in Berlin, Germany.

The first section discusses in a general fashion the fundamental ideas and techniques of the food inspection program, including a consideration of the legal aspects of the inspection.

The second section is devoted to the inspection of the meat of various species of animals. The processing and preservation of meat, blood, fat, etc. under normal conditions and also under con-

ditions which may lead to spoilage is discussed.

The third section deals with hygienic handling of whale meat, and the fourth section with the proper hygienic handling of the fish which are marketed in Germany.

The fifth section gives consideration to the proper slaughtering of poultry, the proper handling of the carcass, and grading for quality and wholesomeness.

In the sixth section particular attention is paid to the processing and preservation of the flesh of wild animals.

Chapter seven is concerned with the handling of eggs.

The final section, four pages in length, discusses the vitamins found in various meat products.

The entire book is well supplemented by good illustrations. It is well written and contains much of value to food inspectors.—[G. Wundram and F. Schonberg: *Tierärztliche Lebensmittelüberwachung (Veterinary Food Inspection)*, 6th ed. 412 pages, 222 illustrations. Paul Parey, Berlin, Hamburg, 1953. Price not given.]—F. KRAL.

### Canine Surgery

The first 11 of the 31 chapters of this book deal with anatomy, physiology, healing and repair, surgical principles, sterile technique, sutures and ligatures, approach and restraint, anesthesia, presurgical care, wound protection, and physiological consideration of some postoperative conditions.

These subjects are well presented by the authors, and the knowledge is a must for the students of modern surgery; also, the graduate will find the time spent in perusing them worth-while.

The last 20 chapters deal with the different parts of the body and the surgery that applies to those areas.

Careful descriptions of the various operative techniques accompanied by excellent illustrations are a definite aid to students in operative surgery.

The practitioner should find "Canine Surgery" an exceptionally fine reference book for the modern methods of performing simple and major operations.—[*Canine Surgery*. Edited by J. V. Lacroix and H. Preston Hoskins. 3rd ed. 731 pages, 537 illustrations. American Veterinary Publications, Evanston, Ill. 1952. Price not given.]—E. K. SALES.

### Inter-Scandinavian Veterinary Meeting

This is a report of the first inter-Scandinavian veterinary meeting held in more than twelve years. The previous meeting had taken place in 1939, at which time it was planned to meet in Sweden in 1944. There were 910 people registered, with participants from Denmark, Finland, Iceland, Norway, and Sweden. During the two-day meeting, there were two plenary sessions and seven sectional meetings with a total of 38 papers. Each

paper is published in full including literature citations and the remarks and questions by various members who discussed the reports. The subjects of papers included infectious diseases, food hygiene, roentgenography, sterility, toxicology, nutrition, and therapy. The Seventh Nordiska Veterinärmötet will meet in Oslo in 1953.—[*Proceedings, Sixth Nordic Veterinary Meeting, Stockholm. Aug. 10-11, 1951. 447 pages.*]  
—ALFRED G. KARLSON.

## REVIEWS OF VETERINARY MEDICAL FILMS

*Scrapie*.—Silent, 16 mm., color, well titled, running time about fifteen minutes. Produced by the California Department of Agriculture, and the Division of Animal Industry. Available from the AVMA Film Library, 600 S. Michigan Ave., Chicago 5, Ill.

This picture shows the symptoms of scrapie (see JOURNAL, December 1952: 455), mainly in 2 sheep, and in several stages of the disease. The film is titled and designed mainly for showing to veterinarians, but can be used for lay showings. No doubt the film will be of great interest due to the newness of this disease in the United States. The California authorities are to be congratulated for recording the symptoms of this disease on color film, and it will serve to alert veterinarians all over the United States to be on the look out for this new disease.

Unfortunately, there are no pictures of autopsies or of the histopathological sections. There are so many feet of film just showing itching and scratching sheep that it becomes rather tiresome to watch. But no doubt that is the way the sheep that have the disease act, and since this is a film depicting scrapie, there is probably little else to show.

*Epizootiology of Anthrax*.—Sound, 35 mm. strip film, color, running time about ten minutes. Comes with large record. Produced by the Communicable Disease Center of the U. S. Public Health Service in Atlanta, Ga. Available from the AVMA Film Library, 600 S. Michigan Ave., Chicago 5, Ill. There is no charge except for mailing.

This strip film consists of about 75 excellent color pictures. The bulk of the pictures depict the anthrax outbreak in Ohio in 1952. It shows the animals commonly infected, the enzootic areas in the United States, a photomicrograph of the causative organisms, some pictures of how a laboratory diagnosis is made and how diagnostic samples should be collected.

There is ample reference to human anthrax as wool sorter's disease. There are some pictures showing the treatment of the condition and how to dispose of carcasses of animals dead of the disease.

The pictures are good and the narration well done. It is a very acceptable film for showing to laymen and students.

*It Pays to Take It Easy*.—Sound, 16-mm., color, running time approximately fourteen minutes. Produced by the Allis-Chalmers Manufacturing Company, Tractor Division, in cooperation with Livestock Conservation, Inc., available from the AVMA Film Library, 600 S. Michigan Avenue, Chicago 5, Ill. Handling charge \$1.50 plus shipping charges.

The purpose of the film is to show the need for proper handling of livestock in loading and shipping to prevent bruising and crippling.

The film features two 4-H teams from Faribault County, Minnesota, who demonstrate through the use of community surveys, charts, and the construction of model equipment and farm-size loading chutes, improved practices at the farm level that will increase farm profits by reducing the number of bruised, crippled, and dead livestock.

Since the film is in color, the portion showing sample cuts of bruised beef is particularly striking in demonstrating resultant losses. This film should be useful to veterinarians in speaking to lay groups especially of livestock producers and truckers.

*Teschen Disease (Symptomatology Contrasts with Hog Cholera and Nutritional Deficiency)*.—Sound, black and white, 16 mm., running time about twelve minutes. Presented by the U. S. Bureau of Animal Industry in cooperation with the Federal Civil Defense Administration. Available for limited distribution from Motion Picture Service, U.S.D.A., Washington 25, D. C.

The picture describes Teschen disease in swine and shows the symptoms produced by the virus of this infection and the various forms that the disease might present. It points at those symptoms of nutritional deficiency and unusual cases of hog cholera that might be confused with those associated with Teschen disease and suggests the differential features that should be considered in making a diagnosis.

This picture is one in a series being acquired and/or planned for production by the U. S. Bureau of Animal Industry in cooperation with the Federal Civil Defense Administration to provide visual training materials for veterinary practitioners, veterinary students, and diagnosticians on foreign animal diseases that could cause severe losses of our livestock. With the possibility of biological warfare attacks against our domestic animals by an enemy, or the accidental introduction of such foreign animal diseases by our present day, rapid air transport, we must become well acquainted with the characteristics of such diseases. The picture should be useful for teaching purposes as well as informative to practitioners who may be the first to observe the presence of unusual animal diseases in this country.

# THE NEWS

## Latest Information on Fifteenth International Veterinary Congress

The fifth bulletin issued by the Organizing Committee of the Fifteenth International Veterinary Congress, to be held in Stockholm, Sweden, Aug. 9-15, 1953, contains information about reduced railway fares for foreigners attending the Congress, about postcongress tours, and about applications for special membership which is of particular interest to those who will not attend the Congress but who wish to obtain its Proceedings.

### SPECIAL MEMBERSHIP APPLICATIONS INVITED

Special membership in the Fifteenth International Veterinary Congress is intended for veterinary medical schools, veterinary faculties, libraries, veterinary associations and authorities which will not be represented at the Congress, and for individual veterinarians unable to attend in person. Special members will receive the "Proceedings of the Congress," Part I (nearly 300 sectional reports and papers) and Part II (the ten plenary lectures and discussions of sectional reports).

Individuals and institutions should send their applications for special membership and remittance to cover *directly* to: Fifteenth Interna-

tional Veterinary Congress, Stockholm 50, Sweden, before Aug. 1, 1953, using a form essentially as follows:

### *Application for Special Membership in Fifteenth International Veterinary Congress*

Special Membership in the Fifteenth International Veterinary Congress, Stockholm, Aug. 9-15, 1953, is applied for by \_\_\_\_\_

Payment for subscription equivalent to 45 Swedish kronor\* has been made on (date) \_\_\_\_\_ through \_\_\_\_\_ (bank):

- a) by check direct to Fifteenth International Veterinary Congress, Organizing Committee, c/o Isaksson, Stockholm 50, Sweden:
- b) to Intecknings banken AB, Stockholm 16, Sweden, for account of the Congress (cross out the alternative not applicable)

Please send Parts I and II of the "Proceedings of the Congress" to the following address:

Title and Name \_\_\_\_\_

Street Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

\*The exchange rate for Swedish kronor in U. S. dollars is about 19½ cents. We suggest that U. S. applicants remit \$9.00 (= 45 kronor).—ED.

The Famous Hardanger Fjord District in Western Norway



## NEWS FROM WASHINGTON

### AVMA Representative Testifies on Doctors Draft Bill

The Armed Services Committee of the U. S. House of Representatives held hearings on the Doctors Draft Bill (H.R. 4495, which is identical to S. 1531 described in the May, 1953, JOURNAL, p. 412) the week of April 20, 1953. General McCallam, the AVMA's Washington representative, testified before the Committee on April 23 and emphasized the following recommendations:

1) That veterinarians without prior military service be called for service under this Act on the basis of the youngest being called first without respect to their status in priorities 1, 2, or 3.

2) That there be included in H.R. 4495 a specific provision for a veterinarian as a member of the National Advisory Committee to the director of the Selective Service System.

3) That there be no distinction between World War II and Korean War service, as now specified on page 3, lines 3 to 11, H.R. 4495.

4) That the Act of Sept. 9, 1950 (64 Stat. 826), be amended to extend the law for one year, that is, until July 1, 1954, rather than until July 1, 1955.

General McCallam also made clear to the Committee the Association's reasons for requesting the above changes.

### COMMITTEE REPORTS TO THE HOUSE

One amendment reported favorably by the Committee to the House was that the National Advisory Committee, in conjunction with the volunteer advisory committees of the states, be authorized to make appropriate recommendations with respect to the deferment of members of faculties of medical, dental, veterinary, and allied specialist schools.

Although not included as an amendment, the Committee reported to the House that "it would seem appropriate that the National Advisory Committee should have added to it at least one representative of veterinary medicine." The authority for such appointment exists in the Universal Military Training and Service Act. Among other desirable accomplishments, the proposed law will:

Prohibit induction or order to active duty any doctor who has completed twenty-one months of service or more since Sept. 16, 1940.

Limit period of active duty to seventeen months for any doctor who has previously completed a period of twelve months or more of active duty since Sept. 16, 1940.

Credit service in the Armed Forces, prior to obtaining a medical education, to be counted as active duty for all purposes.

Require all reserve doctors to be given a

grade or rank commensurate with their age, experience, and ability.

Extend the doctors draft law to July 1, 1955.

### Letter Received Pertaining to Classifications for Federal Veterinarians

A letter from the U.S. Civil Service Commission relative to the interpretation by the U.S. Department of Agriculture of the report referred to in the JOURNAL (May, 1953:412) has been received. This original letter from the Commission was, in effect, a report of a study made at the request of the U.S.D.A. to allow veterinarians to be appointed initially at the GS-9 grade.

After receiving the U.S.D.A. interpretation of this report as published in the May JOURNAL, the Association asked the Commission for its reaction to this interpretation. The following paragraph from the letter would appear to indicate an acceptance of the U.S.D.A. interpretation.

The Department of Agriculture has indicated that it will undertake preparation of revisions of classification standards in accordance with the provisions of our letter of April 2, 1953, of which you have a copy. Although there are some problems to be resolved in the precise definition of the GS-9 and higher grades, and we have not as yet reached a decision on the proposed evaluation of some field positions in GS-14, we believe that we are in agreement with regard to recognition of GS-7 as a preparatory or trainee level and GS-9 as the lowest grade level in which the incumbents independently take regulatory action based on the exercise of professional veterinary medical judgment.

### Status of \$100-a-Month Special Pay

Legislation extending the payment of the \$100-a-month special pay for physicians and dentists in the Armed Forces beyond July 1, 1953, had not been introduced at the time of this writing. Unless legislation is enacted by July 1, 1953, extending this payment, it will expire on that date, except for those officers who have qualified for it during the years it was in effect. They will continue to receive the special pay for as long as they remain on active duty.

It is reported that the Department of Defense is preparing a bill to be introduced for this extension. Whether it will adhere to the recommendations of the Strauss Commission (see May, 1953, JOURNAL, p. 412) is not definitely known. It is quite certain that the proposed bill will not include veterinary officers.

The AVMA is watching developments and will have legislation or amendments introduced to make veterinarians eligible for this pay on the same basis as physicians and dentists.

**Outlook for Research Funds Encouraging**

AVMA members continue to show their faith in the profession's own research program by investing their personal funds to support it.

As a result of the third letter that was mailed to potential contributors, 358 veterinarians have contributed an average of \$11.25 each for a total of \$4,028.50, an increase of 24.6 per cent over the amount contributed since Feb. 25, 1953.

This boosts the total contributions from individuals to \$20,337.89 — an over-all average of approximately \$13.00 from each of the 1,564 veterinarians who have thus far contributed to the fund.

In addition to individual contributions received, state, provincial and local associations have contributed a total of \$4,100; women's auxiliaries have given \$902.00; and commercial companies and other groups have donated \$4,440.

Total contributions from all sources as of April 22, 1953, amounted to \$29,779.89.

In addition to those listed in previous reports, the following organizations have also contributed (see JOURNAL, April, 1953:330-331):

**Veterinary Associations**

Bexar County V.M.A. (Texas)  
Cuyahoga County V.M.A. (Ohio)  
Keystone V.M.A. (Pennsylvania)  
Maine V.M.A.  
Nevada State V.M.A.  
Peninsula V.M.A. (California)  
Pennsylvania State V.M.A.  
West Virginia V.M.A.

**Women's Auxiliaries to the**

Iowa V.M.A.  
Michiana V.M.A.  
Minnesota V.M.S.  
New Jersey V.M.A.  
Ohio State V.M.A.

**Commercial Companies and Related Groups**

Abbott Laboratories  
Rea Serum Company

**Ralston Purina Research Fellowships**

The Ralston Purina Company has announced its research fellowship awards for 1953-1954. The awards are for research in poultry husbandry, dairy husbandry, animal husbandry, and veterinary medicine. The latter award went to Dr. Merthyr L. Miner (ISC '41) of Utah State Agricultural College, who will take his graduate work at the University of Minnesota. His alternate is Dr. LeRoy E. Nelson (ISC '49) of Briceyln, Minn., who would, if the appointment came to him, take his graduate work at Iowa State College.

**Fourth Report on 1952-1953 AVMA Research Fund Campaign (Prepared April 22, 1953)**

State	Total veterinarians	Quota*	Contributions received (to date)	Total amount contributed (to date)
Alabama	226	\$ 2,260.00	19	\$ 260.00
Arizona	71	710.00	12	160.00
Arkansas	69	690.00	9	77.00
California	1,332	13,332.00	87	1,050.00
Colorado	210	2,100.00	18	291.00
Connecticut	138	1,380.00	24	450.00
Delaware	42	420.00	6	85.00
District of Columbia	73	730.00	35	360.00
Florida	300	3,000.00	24	480.00
Georgia	280	2,800.00	13	167.00
Idaho	88	880.00	10	85.00
Illinois	800	8,000.00	108	1,821.00
Indiana	580	5,800.00	53	650.00
Iowa	814	8,140.00	77	915.00
Kansas	375	3,750.00	33	375.00
Kentucky	245	2,450.00	15	272.50
Louisiana	145	1,450.00	6	60.00
Maine	73	730.00	8	67.00
Maryland	149	1,490.00	25	390.00
Massachusetts	300	3,000.00	21	275.00
Michigan	623	6,230.00	65	818.06
Minnesota	525	5,250.00	31	587.00
Mississippi	128	1,280.00	7	50.00
Missouri	460	4,660.00	46	467.00
Montana	93	930.00	8	80.00
Nebraska	330	3,300.00	28	365.00
Nevada	50	500.00	1	10.00
New Hampshire	55	550.00	3	30.00
New Jersey	346	3,460.00	52	733.50
New Mexico	46	460.00	9	85.00
New York	1,161	11,161.00	97	1,730.00
North Carolina	207	2,070.00	26	380.00
North Dakota	70	700.00	5	50.00
Ohio	940	9,400.00	90	951.00
Oklahoma	220	2,220.00	20	338.50
Oregon	198	1,980.00	13	175.00
Pennsylvania	640	6,400.00	77	901.50
Rhode Island	28	280.00	1	25.00
South Carolina	110	1,100.00	4	25.00
South Dakota	119	1,190.00	11	141.00
Tennessee	160	1,680.00	7	287.50
Texas	875	8,750.00	115	936.45
Utah	68	680.00	13	207.00
Vermont	74	740.00	6	57.50
Virginia	180	1,180.00	29	384.50
Washington	314	3,140.00	31	467.00
West Virginia	78	780.00	5	75.00
Wisconsin	664	6,640.00	83	994.00
Wyoming	55	550.00	6	70.00
Hawaii	21	210.00	6	95.00
Canada	.....	.....	44	521.88
Canal Zone	.....	.....	1	5.00
Foreign	.....	.....	1	10.00
<b>Totals</b>	<b>15,136</b>	<b>\$151,360.00</b>	<b>1,564</b>	<b>\$20,337.89</b>

**Other Contributions:**

Veterinary Associations	\$4,100.00
Women's Auxiliaries	902.00
Commercial Companies, etc.	4,440.00
	<b>\$9,442.00</b>

Total contributions from all sources.....\$29,779.89

\*Based on an average contribution of \$10.00 per veterinarian.

### Fund Raising Can Be Fun

Humor has its place when it comes to raising money. This was evidenced recently by the "fun" raising that took place at the local tri-county meeting of veterinarians held in Mt. Vernon, Wash., on March 24.

Part of the program was given over to an auction of surplus veterinary equipment and sporting goods, and the bidding that followed netted \$115. Hats belonging to the bidders were also brought in and put on the auction block when it appeared that the fund would not reach the \$100 goal. Bidding moved along at a brisk pace after the first hat had been chopped to pieces on receiving a low bid.

As a result of this unique activity, the AVMA Research Fund has been enriched by \$115, and the stunt may be food for thought for other associations to spark their fund-raising activities.

Dr. Ray H. Bradbury of Mt. Vernon, Wash., conceived and executed the idea of the "white elephant" auction sale at the Mt. Vernon meeting.

### AVMA Receives Grant from National Science Foundation

The American Veterinary Medical Association has received a grant of \$2,600 from the National Science Foundation to establish a Register of Veterinarians in the United States (see JOURNAL, April, 1952: 204, 225-226).

The AVMA is the first professional society to be awarded a grant by the newly established foundation which was created by an act of Congress to take over the work of the National Scientific Register. The money will be used to defray the costs of abstracting essential statistical information from more than 12,000 questionnaires completed by United States veterinarians and returned to the AVMA. Such information will then be transferred to machine punch cards to be used for future analysis of the profession as a whole.

The compilation of such a register is part of the broad program of the National Science Foundation to develop a comprehensive inventory of scientific and technical personnel in this country.

### Proposed Amendments to Constitution and Administrative By-Laws

The following amendments, which were either presented at the 1952 annual meeting of the House of Representatives (see "Proceedings Book," 1952: 460 and 529) or have been proposed since then, will be submitted to the House for action at its annual meeting in Toronto, Ont., on July 19, 1953. They are published for the information of the membership and in accordance with Section 3, Article

IX of the Constitution, and Section 3 of Article XVIII of the Administrative By-Laws.

#### New Proposals

##### AMENDMENT No. 1

Add a new article to the Constitution pertaining to student chapters, as Article VII, and renumber subsequent articles. It would read as follows:

*Section 1.*—(a) A student organization composed of students in colleges and schools of veterinary medicine approved by the Association's Council on Education may be granted affiliation with the American Veterinary Medical Association upon favorable vote by the Executive Board. The name of such an affiliated organization shall be "The (name of school) Student Chapter of the American Veterinary Medical Association."

b) The qualifications required of a student organization recognized as a student chapter shall be as specified in the by-laws.

##### AMENDMENT No. 2

Add an article to the Administrative By-Laws on the qualifications required for student chapters. It would become Article XVIII, changing present Article XVIII to XIX. It would read as follows:

#### Student Chapters

*Section 1.*—A student chapter affiliated with the American Veterinary Medical Association shall have and maintain the following qualifications:

a) It shall be an organization of students in a college or school of veterinary medicine approved by the Council on Education of the American Veterinary Medical Association.

b) The application for affiliation shall have the endorsement of the dean of the institution concerned.

c) It shall have not less than 60 per cent of the eligible students as members.

*Section 2.*—A student chapter shall establish its own rules of government, but they shall conform as closely as possible to the model constitution for student chapters developed by the American Veterinary Medical Association.

It is intended that each student chapter shall control the frequency and character of its own meetings; but the American Veterinary Medical Association will aid in promoting the success and value of student chapters by frequent consultations and advice, as well as by arranging for speakers when possible.

*Section 3.*—Each student chapter shall submit a semiannual report not later than thirty (30) days after the close of each term, which shall include:

a) A summary of the meetings held during the term—giving the date of each, the attendance, the principal speaker and his subject, and other pertinent information pertaining to the chapter's activities.

b) Names of the officers, class representatives, and of the members, by classes, for the succeeding term.

*Section 4.*—The annual dues paid to the Association by each student chapter shall be \$10 per year which, under provisions approved by the Executive Board, shall entitle it to the following:

a) A copy of each issue of the monthly JOURNAL.

b) The opportunity to publish items about its chapter activities in the JOURNAL.

c) The cooperation of the American Veterinary Medical Association in advancing the interests of each student chapter by contributing from its organization, membership, and experience such services as may be mutually arranged.

d) The annual dues shall apply to the year beginning January 1 and shall be due February 1 of each year. Student chapters admitted on or after July 1 of each year shall pay only \$5.00 for the remainder of the current year to January 1.

e) The use on all official stationery of the special emblem.

*Section 5.*—Members of student chapters shall be entitled to certain privileges and advantages which shall be authorized by the Executive Board. These advantages and privileges shall be outlined in detail and furnished at regular intervals to student chapters.

*Section 6.*—A student chapter may be disbanded with the approval of the Executive Board, provided its annual dues for the current calendar year have been paid. The Executive Board may discontinue the affiliation of a student chapter if its annual dues are not paid promptly, or if it becomes inactive, or if its continuance is considered contrary to the best interests of the Association.

[Purpose.—(1) To officially recognize student chapters in the Constitution and Administrative By-Laws. (2) To establish the rules and regulations governing the establishment, affiliation, and conduct of student chapters. (3) To specify the special benefits available to student chapters and their members.]

#### AMENDMENT NO. 3

To provide for the appointment of the treasurer by the Board of Governors as voted by the Executive Board at the annual meeting in 1952, revise Section 1 of Article VI of the By-Laws as follows:

*Section 1.*—Appointment: The treasurer shall be appointed by the Board of Governors, subject to confirmation by the Executive Board and the House of Representatives, at each regular annual session.

[Purpose.—(1) To give the Executive Board and House of Representatives the power and authority to appoint the treasurer instead of his being elected by the general membership. This

is believed more in keeping with the efficient conduct of the treasurer's duties which practically require the treasurer to reside in the area of the central office. (2) To give closer control of this important office to the Board and House.]

#### AMENDMENT NO. 4

To provide for the representation of the Air Force Veterinary Corps in the House of Representatives, revise paragraph (a) under Section 3 of Article IX of the Administrative By-Laws as follows:

a) The delegates and alternates representing the veterinarians in the Army and the Air Force of the United States shall be chosen by the chief of the veterinary division of the respective Surgeon General's offices.

In paragraph (c) of Section 4, add "and Air Force" after the word Army in the first line, and add "and even-numbered years, respectively" at the end of the paragraph.

[Purpose.—To provide for the representation of the autonomous Veterinary Corps of the Air Force in the AVMA House of Representatives. The Army Veterinary Corps delegate has hitherto been representing all members in the Armed Forces but, upon petition of the Air Force Veterinary Corps, the Executive Board voted to provide for the separate representation of Air Force veterinarians.]

#### AMENDMENT NO. 5

Renaming of Executive Committee of House of Representatives and shifting it in the By-Laws from Article XII, entitled "Councils and Committees" to the "House of Representatives," Article IX.

Number 17 of Article XII entitled "Councils and Committees" shall be transferred to Article IX entitled "House of Representatives" and become Section 10 of this article.

The title of the paragraph and this committee shall be changed to "Advisory Committee of the House of Representatives." A sentence (5) shall be added to paragraph (d)—*Duties*, which shall read as follows:

5) The committee shall meet following the adjournment of the annual meeting of the Executive Board, and sufficiently in advance of the meeting of the House so that the committee's recommendations to the House can be presented in writing to the delegates prior to or at the time the House convenes.

[Purpose.—(1) To avoid misunderstanding and confusion which have arisen in the past from the too-similar terminology used for these two bodies of the Association when reference is made to either the *Executive Board* of the AVMA or the *Executive Committee* of the House. (2) To facilitate deliberations in the House when its members have before them matters which have been acted upon by their "Advisory Committee" (proposed new designation for the present Executive Committee). By having the recommendations

of the Advisory Committee in writing, the House will have a clear understanding of same.]

#### AMENDMENT No. 6

Re dropping of members who resign from constituent association, add to the end of paragraph (h), Section 3, Article X of the Administrative By-Laws the following sentence:

Members who resign from a given constituent association shall not be dropped from membership by the American Veterinary Medical Association unless that constituent association has adopted reciprocity of membership as described above.

[Purpose.—To allow members to resign from constituent associations without being dropped by the AVMA unless the constituent association has adopted reciprocity of membership as provided for in paragraph (h), Section 3, of Article X of the By-Laws.]

#### AMENDMENT No. 7

To amend the Administrative By-Laws, Section 2 of Article X, entitled "Membership" by inserting the Letter (a) after "active members, or the general membership shall consist of" and adding the following at the end of the present paragraph:

and (b) of graduates of other foreign veterinary schools who are approved for membership by the Executive Board and who are citizens of the United States or Canada, and (c) of graduates of veterinary schools formerly conducted in the United States or Canada who are approved for membership by the Executive Board.

[Purpose.—To provide for the admission of graduates of foreign and closed schools on an individual basis.]

#### AMENDMENT No. 8

To amend Section 2 of Article III, Administrative By-Laws, add a new paragraph entitled the "President-Elect" which shall read as follows:

He shall become acting president to fill out the unexpired term in the case of death or total disability or resignation of the president. He shall be duly installed into the office of the president in any of the aforesaid events by the chairman of the Executive Board.

#### AMENDMENT No. 9

To amend Section 2 of Article IV, Administrative By-Laws, entitled "Vice-Presidents," delete the second paragraph.

#### AMENDMENT No. 10

To amend Section 3 of Article VII, Administrative By-Laws, entitled "Executive Board Chairman," add the following paragraph:

He shall become acting president to fill out the unexpired term in the case of death, total disability, or resignation of the president and president-elect. When he assumes the office of acting president, an election of an acting chairman of the Executive Board shall be conducted by mail ballot of the Executive Board members. Such acting chairman shall serve in this capacity

until the next annual meeting of the Executive Board.

[Purpose for amendments 8, 9, and 10.—To insure that the person required to fill out the unexpired term of the principal officer of the Association will have as intimate knowledge as possible of the work of the Association. Under the present system of election and succession, the first vice-president may have had no opportunity to obtain such knowledge.]

#### AMENDMENT No. 11

To amend items (a) and (b) of Section 4, Article IX, Administrative By-Laws, the members representing the constituent associations in the following geographical divisions shall be elected to serve for a four-year term beginning with the 1953 session of the House:

Arizona	North Carolina
California	Ohio
Connecticut	Oregon
Dist. of Columbia	Rhode Island
Georgia	South Dakota
Illinois	Texas
Iowa	Vermont
Kentucky	Washington
Maine	Wisconsin
Massachusetts	Army
Minnesota	Puerto Rico
Missouri	British Columbia
Nebraska	Ontario
New Hampshire	Quebec
New Mexico	

The members representing the constituent associations in the following geographical divisions shall be elected to serve a four-year term beginning with the 1955 session of the House:

Alabama	North Dakota
Arkansas	Oklahoma
Colorado	Pennsylvania
Delaware	South Carolina
Florida	Tennessee
Idaho	Utah
Indiana	Virginia
Kansas	West Virginia
Louisiana	Wyoming
Maryland	Canal Zone
Michigan	Cuba
Mississippi	NAFV
Montana	Alberta
Nevada	Manitoba
New Jersey	Nova Scotia
New York	Saskatchewan

[Purpose.—To establish the schedule for the election of representatives from constituent associations to the House in accordance with the four-year terms provided for in other pertinent sections of the Administrative By-Laws.]

#### Dinner Bell Program Features Interviews with Veterinarians

Dr. Harold M. Moe, Hammond, Ind., chairman of the Chicago V. M. A.'s Public Relations Committee, working with Dr. A. G. Misener, Chicago, secretary of the Illinois State Veterinary Medical Association, has arranged with

Carl Neumann, farm program director of radio station W.L.S. in Chicago, to have veterinarians interviewed during that station's "Dinner Bell Time" program. This is the oldest continuous "sustaining" farm radio program. It was begun over twenty-five years ago and has been broadcast regularly five days a week ever since.

Veterinarians participating and the subjects they have or will discuss are:

April 1 — C. D. Van Houweling, Chicago: Why Garbage Fed to Hogs Should Be Cooked.

April 15 — E. S. Weisner, Goshen, Ind.: Preventing Losses in Baby Chicks.

April 29 — L. M. Hutchings and C. R. Donham, Lafayette, Ind.: Reducing Death Losses in Baby Pigs.

May 13 — C. A. Lemen, Warrensburg, Ill.: Bloat in Cattle and Sheep.

May 27 — O. W. Seher, Chicago: Federal Meat Inspection.

June 10 — W. A. Aitken, Chicago: Hog Cholera Control.

### First World Congress on Fertility and Sterility

The First World Congress on Fertility and Sterility was held at the Henry Hudson Hotel in New York City on May 25-31, 1953. Dr. M. G. Fincher, Department of Medicine and Obstetrics, New York State Veterinary College, Cornell University, Ithaca, served as honorary chairman of the Veterinary Section; Dr. John MacLeod, Cornell University Medical College, New York City, as chairman; L.v.d. Sluis, professor, health service for cattle, Leeuwarden, Holland, honorary secretary; and C. A. V. Barker, Ontario Veterinary College, Guelph, Ont., secretary. The papers, presented at the veterinary session, by research workers and authorities in this country and from several European countries, covered a wide range of subjects including problems of semen storage, vibriosis, tumors of reproductive organs, trichomoniasis, and others.

The following speakers were listed on this section of the program: Drs. C. P. Zepp, Jr., New York City; Kenneth McEntee, S. J. Roberts, D. E. Hughes, H. L. Gilman, and Peter Olafson, New York State Veterinary College, Cornell University, Ithaca; C. A. V. Barker, Ontario Veterinary College, Guelph, Ont.; T. Bonadonna, director, Lazzaro Spallanzani Institute for Artificial Insemination, Milan, Italy; Konstantine Vlachos, Veterinary College, Thessalonica, Greece; R. H. Foote, New York State College of Agriculture, Cornell University, Ithaca; David E. Bartlett, American Breeders Service, Chicago; Wayne Binns, Utah State Agricultural College, Logan; L. E. Rowson, Cambridge and District Cattle Breeders Ltd.,

Cambridge, England; E. L. Willett and Henry Dunn, American Foundation for the Study of Genetics, Madison, Wis.; J. A. Henderson, Ontario Veterinary College, Guelph, Ont.; John MacLeod, Cornell University Medical College, New York City; L.v.d. Sluis, Health Service for Cattle, Leeuwarden, Holland; H. E. Kingman, Wyoming Hereford Ranch, Cheyenne, Wyo.; W. W. Williams, Springfield, Mass.; J. R. Lawson, Ministry of Agriculture and Fisheries, Veterinary Laboratory, Weybridge, England; and A. H. Frank, BAI, Beltsville, Md.

s/M. G. FINCHER, *Honorary Chairman.*

### STUDENT CHAPTER ACTIVITIES

**Iowa Chapter.**—At the annual winter smoker held in March, 1953, the following officers were elected to serve the Iowa State College Student Chapter of the AVMA for the new term: Lee Sutherland, president; Bob Nelson, president-elect; Ray Pahle, treasurer; Pete Bendorf, vice-president; James Creel, secretary; and William McGrory, critic.

The Gamma Chapter of Phi Zeta, national honorary fraternity for veterinarians, announced the following new pledges: William Bunting, Meredith Moore, Nam Chung, Jack Hill, John Bowne, Robert Miesbauer, Channing Cotton, Clarence Inman, Stephen Dirks, John Krob, Harry Yoder, Ray Pahle, James Young, Daryl Bottorf, Henry Lyons, Leon Sutton, Dr. H. W. Reuber, Don Wheeler, Don Smith, and Harvey Peterson.

s/R. G. MIESBAUER, *Publicity Chairman.*

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**Minnesota Chapter.**—A brief review of the activities of the University of Minnesota Student Chapter of the AVMA for the winter quarter of 1953 follows:

At the January 7 meeting, a motion picture, "Diseases of Swine," was shown through the courtesy of Cutter Laboratories. At the regular meeting in February, President-Elect Albert Luedke was chosen to represent the Chapter at the annual AVMA convention in Toronto. After the business meeting, members discussed the legal aspects of building a small animal hospital and practice. On March 5, Dr. Carl Schlotthauer, Mayo Foundation, Rochester, discussed "Ethics and Public Relations."

s/LYLE KANSANBACK,  
*Corresponding Secretary.*

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**Illinois Chapter of Phi Zeta Installed.**—The Mu chapter of Phi Zeta, national veterinary honor society, was installed at the University of Illinois College of Veterinary Medicine on April 10, 1953, in exercises conducted by Dr. E. A. Hewitt, professor of veterinary physiology and pharmacology, Iowa State College, secretary of the national organization.

Charter members of the Illinois chapter of

Phi Zeta are Dean Robert Graham and Drs. J. O. Alberts, P. D. Beamer, R. D. Hatch, R. P. Link, L. E. St. Clair, Jesse Sampson, and R. E. Witter, all members of the faculty of the veterinary college. Officers of the chapter are Dr. L. E. St. Clair, president; Harold C. McCutchan, junior, vice-president; and Dr. R. E. Witter, secretary-treasurer.

Sixteen members were initiated into Phi Zeta. They included five faculty members: Drs. L. E. Boley, H. S. Bryan, O. D. Grace, H. J. Hardenbrook, and C. C. Morrill; three members of the 1952 graduating class: Drs. Robert T. Butzow, now a faculty member; George F. Fehrenbacher, Wyoming, Ill., and Earl Lutz, Champain; seniors: Donald J. Carren, John H. Dust, John Ehrhardt, Elmer T. Owings, and Glenn L. Waxler; and juniors Allen L. Graham, Harold C. McCutchan, and Ralph McQueen.

**Ontario Chapter.**—The annual presentation of awards and prizes to students at Ontario Veterinary College took place at exercises held on the afternoon and evening of March 20, 1953. Principal T. Lloyd Jones introduced the recipients and Deputy Minister of Agriculture C. D. Graham presented the awards and prizes as follows:

First General Proficiency Award (to the student attaining highest academic class standing): third year, William Medway; second year, Lars Herman Amos Karstad; first year, John Nelson Chappel.

Second General Proficiency Award (to the student attaining second highest class standing): third year, Mircea Adrian Gross; second year, Albert Moshe Jonas; first year, Niels Ole Nielsen.

Third General Proficiency Award (to the student attaining third highest class standing): third year, Harold Clifford Struthers; second year, James Roswell Arnott; first year, Robert Hugh Dunlop.

The foregoing were for the academic session, 1951-1952.

For the academic session 1952-1953, the following awards were made:

Holstein-Friesian Association of Canada (\$50 award to the junior student submitting the best case histories as required by the award): John Douglas Thomson.

Toronto Humane Society Awards (for essays submitted in accordance with requirements of award): first prize, Mircea Adrian Gross; second prize, William Medway.

Keenan Memorial Award (by the Canadian SPCA to junior student from Quebec Province considered most worthy): Barbara Florence Bradbury.

Canadian Army Veterinary Corps Award (to a war veteran attaining highest academic standing and judged most worthy): Clarence Malcolm Fraser.

Omega Tau Sigma Award: Clarence Malcolm Fraser.

Leadership Awards (in recognition of services rendered by students elected to positions of leadership): to Kenneth Robert MacDonald, president of the Students' Administrative Council; and to Hubert Roland Somerville, Lawrence Ellwood Gray, Allan Robert Corey, and Roderick Reid Davies, each president, respectively, of the junior, intermediate, sophomore, and freshman year classes.

At the afternoon exercises, an address was made by **Dr. H. J. Stafseth**, professor of bacteriology and public health, Michigan State College.

At the banquet of the student chapter in the evening, **Mr. Harvey D. Branton** served as toastmaster and introduced **Mr. R. E. Coleman**, president of the chapter, **C. D. Graham**, deputy minister of agriculture, and **Dr. J. D. MacLachlan**, president of O.V.C., all of whom spoke briefly. The O.V.C. student chapter trophy presented annually to the junior student adjudged outstanding in sportsmanship, scholastic ability, extra curricular activities, and personality was awarded to William Charles Gray.

Mrs. H. S. MacDonald, president of the AVMA Women's Auxiliary, presenting special awards (booklets containing the notes on special therapeutics from the lectures of the late Dr. R. A. MacKintosh.)



Awards of specially printed booklets containing notes from the lectures of the late Dr. R. A. MacKintosh were made by Mrs. H. S. MacDonad, president of the AVMA Women's Auxiliary, to several students from Saskatchewan Province.

Dr. J. G. Hardenbergh, AVMA executive secretary, then spoke on "Veterinary Education Comes of Age in North America."

The day's events were concluded by an "at home" sponsored by the Students' Administrative Council.

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**Missouri Chapter.**—The regular meeting of the University of Missouri Student Chapter of the AVMA was held April 13, 1953, at the clinic. Dr. Jake Fortenberry, from the Cutter Laboratories, spoke to the group on hog cholera and other swine diseases that sometimes complicate its diagnosis. A motion picture was shown on this subject. Dr. Fortenberry also discussed the different types of vaccines for hog cholera used in the past as well as the new modified live virus vaccines.

At the business session, members voted to have a picnic which would include a softball tournament. The faculty members and their wives were invited.

s/JACK O. PARKER, *Secretary*.

## WOMEN'S AUXILIARY

**Maine Auxiliary.**—At the January 14 meeting of the Women's Auxiliary to the Maine Veterinary Medical Association, the following officers were elected: Mrs. J. A. (Beatrice) Elliott, Bangor, president; Mrs. A. E. (Marie) Coombs, Skowhegan, president-elect; Mrs. S. (Evelyn) Merrill, Augusta, vice-president; and Mrs. R. R. (Teresa) Monahan, secretary-treasurer. The following were elected to the executive committee: Mrs. E. C. (Marguerite) Moore, Lewiston; Mrs. S. W. (Laura) Stiles, Portland; and Mrs. C. F. (Doris) Davis, Rumford.

At the April 8 meeting, members enjoyed cards, visiting, and shopping in Bangor. The guest speaker was Dr. Turner of the English Department, University of Maine.

s/(MRS. R. R.) TERESA MONAHAN, *Secretary*.

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**West Virginia Auxiliary.**—The Women's Auxiliary to the West Virginia Veterinary Medical Association held a social meeting on March 1-2, 1953, at the Greenbrier Hotel in White Sulphur Springs. Mrs. H. P. Buckley, White Sulphur Springs, and Mrs. Russell H. Thompson, Union, comprised the committee on arrangements.

The annual business meeting, with election of officers, will be held in Charleston in October.

s/(MRS. W. L.) MAXINE E. REHKEMPER,  
*Secretary*.

**Wisconsin Auxiliary.**—The annual summer meeting of the Women's Auxiliary to the Wisconsin Veterinary Medical Association will be held June 8-10, 1953, in conjunction with the annual postgraduate conference for veterinarians at the University of Wisconsin, Madison. The following are officers of the Auxiliary: Mrs. Rolland K. Anderson, Elkhorn, president; Mrs. E. A. Woelffer, Oconomowoc, first vice-president; Mrs. W. R. Winner, Madison, second vice-president; Mrs. A. I. Moyle, Union Grove, secretary-treasurer; and Mrs. A. E. Moats, Cedarburg, publicity chairman.

s/MRS. ALTON I. MOYLE, *Secretary*.

## APPLICATIONS

### Applicants — Members of Constituent Associations

In accordance with paragraph (b) of Section 2, Article X, of the Administrative By-Laws, as revised at the annual meeting of the House of Representatives, Aug. 18, 1951, in Milwaukee, Wis., the names of applicants residing within the jurisdictional limits of the constituent associations shall be published once in the JOURNAL.

The following applicants have been certified as members of the constituent association that has jurisdiction over the area in which the applicant resides. This certification was made by the secretary of the constituent association in accordance with Section 2, Article X, of the Administrative By-Laws.

- BROWN, HARRY K.  
2300 Berlin Turnpike, Newington, Conn.  
D.V.M., Ontario Veterinary College, 1950.
- FULL, EMMETT  
Mt. Airy, Md.  
D.V.M., Iowa State College, 1946.
- GOTAY, FRANK  
12 Sol St., Ponce, Puerto Rico.  
V.M.D., University of Pennsylvania, 1948.
- HASKELL, JOSEPH W.  
Norwich, Ont.  
D.V.M., Ontario Veterinary College, 1948.
- HINDS, HARRY  
511 N. Lane St., Palmyra, Mo.  
D.V.M., Kansas State College, 1909.
- ISBELL, WILLIAM J., JR.  
P. O. Box 800, Langdale, Ala.  
D.V.M., Alabama Polytechnic Institute, 1943.
- JONES, L. L.  
Sutherland, Iowa.  
D.V.M., Kansas State College, 1917.
- MCGILL, DELBERT A.  
225 South Cedar St., Centralia, Wash.  
D.V.M., Washington State College, 1941.
- ROQUEMORE, CHARLES R.  
1201 South "C" St., Wellington, Kan.  
D.V.M., Tuskegee Institute, 1950.
- SELLMAN, WILLIAM J.  
180 N. Genesee St., Utica, N. Y.  
D.V.M., Ontario Veterinary College, 1918.
- SOMMER, HENRY L.  
1250-17th Ave., San Francisco, Calif.  
V.M.D., University of Pennsylvania, 1909.

**TELISHEWSKY, PHILIP**

530 Anderson Avenue, Winnipeg, Man.  
D.V.M., Ontario Veterinary College, 1952.

**THOMPSON, WILLIAM M.**

5 East Glen Iris, Tuscaloosa, Ala.  
D.V.M., Alabama Polytechnic Institute, 1941.

**ZEMJANIS, RAIMUNDS**

Brooten, Minn.  
V.S., Royal Veterinary College, Stockholm, 1948.

**Applicants — Not Members of Constituent Associations**

In accordance with paragraph (b) of Section 2, Article X, of the Administrative By-Laws, as revised at the annual meeting of the House of Representatives, Aug. 18, 1951, in Milwaukee, Wis., notice of all applications from applicants residing outside the jurisdictional limits of the constituent associations, and members of the Armed Forces, shall be published in the JOURNAL for two successive months. The first notice shall give the applicant's full name, school, and year of graduation, post office address, and the names of his endorsers.

**First Listing**

**CADY, JOHN H.**

1700 Kraft St., Oceanside, Calif.  
D.V.M., Ontario Veterinary College, 1941.  
Vouchers: W. O. Kester and J. B. Couch.

**DEVAKULA, SHANANWAT**

Veterinary College, Phya Thai, Bangkok, Thailand.

B.V.Sc., Chulalongkorn University, Thailand, 1942.

Vouchers: H. C. H. Kernkamp and H. J. Griffiths.

**HIDALGO, RAUL**

Tlacoquemeca No. 529 Col. del Valle, Mexico, D. F., Mex.

D.V.M., National School of Veterinary Medicine, Mexico, 1950.

Vouchers: F. Camargo and J. Campbell.

**KADETS, MARTIN**

39th Medical Group, APO 942, c/o P.M. Seattle, Wash.

D.V.M., Kansas State College, 1941.

Vouchers: W. O. Kester and J. B. Couch.

**OONYAWONGSE, RATANA**

Veterinary Dept., Ministry of Agriculture, Bangkok, Thailand.

D.V.M., University of Philippines, 1936.

Vouchers: K. G. McKay and W. J. Mathey, Jr.

**SAN AGUSTIN, FELICISIMO**

30 Mariveles, Sta. Mesa Hts., Quezon City, Philippines.

D.V.M., University of Philippines, 1934.

Vouchers: A. K. Gomez and J. G. Hardenbergh.

**Second Listing**

**BEADNER, HAROLD F.**, 1205 Birk Ave., Ann Arbor, Mich.

**DAY, ROBERT W.**, Headquarters, Flying Training Air Force, Office of the Air Surgeon, Waco, Texas.

**GORMAN, HARRY A.**, 1538 Mesa Ave., Broadmoor, Colorado Springs, Colo.

**NOVICH, SAMUEL D.**, c/o Dr. N. R. Matthews, 384 Gramatan Ave., Mt. Vernon, N. Y.

**U. S. GOVERNMENT**

**Dr. Alexander to Study Sheep Disease.**—Dr. R. A. Alexander, director of Veterinary Services for the Union of South Africa, arrived in Washington April 20, 1953, at the invitation of the U. S. Department of Agriculture to assist in a study of the sheep disease known as bluetongue. Dr. Alexander will go to California to meet with Dr. W. A. MacDonald, BAI inspector in charge, Dr. A. G. Boyd, state veterinarian, and Dr. G. H. Hart, dean, School of Veterinary Medicine, University of California.

If time permits, Dr. Alexander hopes to visit Texas and Utah, the other two states in which the disease has been suspected. He made the diagnosis from cultures from infected California sheep sent to him in South Africa. Bluetongue is largely confined to the African continent and has caused heavy economic losses in the Union of South Africa for about eighty years.

**Dr. Eckert Appointed Inspector in Charge of Meat Inspection at San Francisco.**—Dr. Arthur F. Eckert (OVC '31) has been appointed to succeed the late Dr. A. J. Wahn as inspector in charge of meat inspection at San Francisco. Dr. Eckert transferred from the position of assistant inspector in charge of meat inspection in New York City. Prior to that he had served



**Dr. Arthur F. Eckert**

as inspector in charge in Topeka, Kan., Miami, Okla., Chicago, Ill., and Omaha, Neb. From 1943 to 1948, Dr. Eckert was superintendent of the Illinois Meat Company in Chicago. He assumed his new duties on March 25.

S/C. H. PALS.

**Veterinary Personnel Changes.**—The following changes in the force of veterinarians in the U. S. Bureau of Animal Industry are reported as of April 17, 1953.

#### NEW APPOINTMENTS

Elmer M. Davis, Kansas City, Kan.  
Earl F. Huffman, Lansing, Mich.  
Carroll C. Steele, Omaha, Neb.

#### RESTORATION AFTER MILITARY FURLOUGH

Jack E. Fox, Kansas City, Kan.

#### MILITARY FURLOUGH

Frank A. Peak, Mason City, Iowa.

#### RESIGNATIONS

Arthur M. Milliron, Los Angeles, Calif.  
Robert K. Morris, Baton Rouge, La.  
Louis Torchen, St. Louis, Mo.

#### RETIREMENT

Albert J. Schoen, St. Louis, Mo.

#### TRANSFERS

Hugh C. Beasley, from Mexico City, Mex., to Raleigh, N. Car.  
John R. Burns, from Dubuque to Mason City, Iowa.  
Robert G. Freel, from Mexico City, Mex., to Boston, Mass.  
Eric W. Linder, from Spokane to Seattle, Wash.  
Arthur R. Thiele, from Boston, Mass., to New York, N. Y.

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**Dr. Peterman Retires from BAI.**—Dr. J. E. Peterman (StJ '16) of Lincoln, Neb., retired from the Bureau of Animal Industry on Feb. 18, 1953. For about twenty years, he had been closely associated with field research on swine erysipelas and is recognized as a top authority on that subject. Dr. Peterman has been chief federal veterinarian in Nebraska for many years.

## AMONG THE STATES AND PROVINCES

### Alabama

**State Association.**—The forty-sixth annual meeting of the Alabama Veterinary Medical Association was held at the Reich Hotel in Gadsden on March 19-21, 1953.

The following speakers presented papers on the scientific program: **Drs. Ray Ashwander**, Decatur; **M. L. Crawford**, Marion; **W. R. Cryar**, Birmingham; **J. H. Carter**, Cullman; **C. T. Chapman**, Troy; **D. G. Gill**, state health officer, Montgomery; **Theo L. Gail**, Fairhope; **Geo. V. Kenmore**, Montgomery; **J. M. Luke**, Eufaula; **B. N. Lauderdale**, veterinarian in charge, BAI, Montgomery; **J. G. Milligan**, state veterinarian, Montgomery; **T. M. Miller**, Dothan; **W. P. Monroe**, Anniston; **J. D. Nall**, Birmingham; **C. H. Poitevint**, Dothan; **A. H. Quin**, Professional Service Division, Jensen-Salsbery Laboratories, Inc., Kansas City, Mo.; **C. J. Rehling**, state toxicologist, Auburn; **J. L. Sledge**, Evergreen; **C. L. Smith**, Huntsville; **J. B. Taylor**, assistant state veterinarian, Elba; and the fol-

lowing faculty members of the School of Veterinary Medicine, Alabama Polytechnic Institute, Auburn: **W. S. Bailey**, **F. A. Clark**, **W. J. Gibbons**, **B. F. Hoerlein**, **E. M. Jordan**, **A. A. Leibold**, **J. E. Neal**, **C. S. Roberts**, **R. S. Sugg**, dean, and **H. R. Seibold**.

The officers for the ensuing year are: **Drs. R. G. Isbell**, Gadsden, president; **L. E. Irby**, Mobile, vice-president; **M. K. Heath**, Auburn, secretary-treasurer. The following members were elected to the executive board: **Drs. G. D. Cloyd**, Florence; **J. L. Sledge**, Greensboro; and **M. L. Crawford**, Marion.

s/M. K. HEATH, Secretary.

### Arizona

#### Coccidioidomycosis Acquired in Feeding Pens.

—Evidence available from postmortem examinations of cattle in Arizona continues to indicate coccidioidomycosis is an infection acquired by the animals while they are being fattened in infected pen-feeding areas. The reservoir of the infectious organism remains obscure.—**Charles J. Prchal**, Inspector in Charge, Federal Meat Inspection Service, Phoenix, Ariz.

### District of Columbia

**Dr. Fladness Recuperating.**—Dr. S. O. Fladness (CVC '12), assistant chief of the U. S. Bureau of Animal Industry, suffered a heart attack while in San Francisco in late February. He has been hospitalized in Washington where he is recuperating.

### Illinois

**Northern Association.**—The annual spring meeting of the Northern Illinois Veterinary Medical Association was held in the Hotel Faust, Rockford, on April 15, 1953.

The following speakers comprised the program: **Drs. Clifford A. Lemen**, Warrensburg; **H. C. H. Kernkamp**, School of Veterinary Medicine, University of Minnesota, St. Paul; **Mr. W. A. Fuller**, Rockford; **Drs. Roy A. Thompson**, superintendent, Division of Livestock Industry, Springfield; **Wm. E. Petersen**, professor of dairy husbandry, University of Minnesota, St. Paul; **Paul H. Phillips**, University of Wisconsin, Madison; **J. K. Bone**, Chicago; **W. I. Whittier**, University of Illinois, Urbana; **Jack R. Dinsmore**, Libertyville; and **Wm. J. Gay**, Woodstock.

A cocktail hour and banquet followed the scientific session.

s/J. W. BOLLER, Secretary.

• • •

**Eastern Illinois Association.**—The spring meeting of the Eastern Illinois Veterinary Medical Association was held March 5 at Hotel Tilden Hall, Champaign. Dinner was served to 66 members and guests. Dr. and Mrs. Lemen of Warrensburg, and Dr. and Mrs. Miller, of Lincoln, were guests of the association. Mrs.

Miller urged the members to cooperate in promoting local radio programs dealing with veterinary medical topics. The women adjourned to the Sun Room for their business meeting.

The motion picture, "Anthrax in Ohio," was shown through the courtesy of the state veterinarian of Ohio.

Dr. R. K. Shideler, of Danville, was elected president-elect of the Association, and Dr. L. R. Bain, Urbana, was elected secretary-treasurer. Dr. Erickson, Cerro Gordo, assumed his duties as president. Questionnaires on fees were distributed and will be summarized later. The speaker of the evening was **Dr. R. E. Witter** of the College of Veterinary Medicine, University of Illinois, Urbana, who discussed "The Psychology of Client Relations."

s/L. R. BAIN, Secretary.

**Visitors Inspect Illinois Veterinary Medicine Building.**—Approximately 150 persons visited the University of Illinois College of Veterinary Medicine when it opened its new veterinary medicine building for inspection on April 8. Although the college has occupied the building since January, 1952, finishing touches were not completed until recently.

Visitors were conducted on a tour of the modern, four-story building which houses the departments of veterinary pathology and hygiene, physiology and pharmacology, and anatomy and histology. Included in the building are three classrooms, six teaching labora-



Visitors inspecting Illinois' new veterinary medicine building become acquainted with the scopicon, used primarily for micro-projection. On the right are Drs. N. D. Levine (seated) and C. C. Morrill (standing), staff members of the College of Veterinary Medicine. A visitor was Dr. C. D. Van Houweling (center rear), assistant executive secretary of the AVMA.

tories, an auditorium seating 273 persons, a museum, a library, animal rooms, administrative offices, and research laboratories. A new, two-story research annex adjoins the building. In

the planning stage are a large animal and a small animal clinic unit to house the department of veterinary clinical medicine.

## Indiana

**National Institute of Animal Agriculture.**—The National Institute of Animal Agriculture held its third annual meeting at Purdue University, Lafayette, on April 20-21, 1953. About 200 agriculturalists from all parts of the nation attended. The theme of the meeting was "Expanding Horizons of Agricultural Research." Mr. P. O. Wilson of the National Livestock Producers served as chairman.

After the welcome by Vice-President **F. C. Hockema** of Purdue University, **Dr. L. M. Hutchings**, also of Purdue University, spoke on "The Significance of Livestock Health to Animal Agriculture." Then the chairman of the Institute, **Dean H. J. Reed** of Purdue University, spoke on "Why We Are Here."

The late afternoon and evening of Monday saw the delegation split into four work groups to study the need for research on agricultural subjects. The recommendations of these groups were reported on Tuesday by the chairmen as follows: **Dr. Roy C. Newton** of Swift and Company for the section on "Meat and Meat Animals"; **Dr. James H. Hilton** of North Carolina State College (and president designate of Iowa State College) for "Dairying and Dairy Products"; **Dr. Cliff Carpenter** of the American Poultry Institute for "Poultry and Poultry Products"; and **Dr. George D. Scarseth** of the American Farm Research Association for "Crops and Machinery."

At luncheon, **Dr. C. F. ("Boss Kett") Kettering** of Dayton, Ohio, spoke on "Research." In the afternoon, **Dr. Elmo Roper**, N.B.C. commentator, and **Mr. David I. Mackie**, of the Eastern Railroad Presidents Conference, spoke to the group. At the final dinner session, the Honorable **Ezra Taft Benson**, Secretary of Agriculture, spoke on "Reshaping the Future."—*W.A.A.*

**Sidetrack Veterinary School.**—Indiana farmers requesting legislation for the establishment of a school of veterinary medicine at Purdue University were sidetracked when a commission was set up to study the needs for such a school. It will report at the next general session of the legislature.—*Prairie Farmer*, April 4, 1953.

**Tenth District Association.**—**Dr. David O. Jones**, of the Ohio State University College of Veterinary Medicine, spoke on antibiotics in the treatment of mastitis at the March 19 meeting of the Tenth District (Ind.) Veterinary Medical Association.

**Dr. and Mrs. Robert Miller** were hosts for this meeting.

At the April 16 meeting in Rushville, the

guest speakers were **Col. Jules Kiplinger**, who spoke of his experiences in foreign countries, and **Dr. Emmett Spieth**, of Jeffersonville, president of the Indiana Veterinary Medical Association.

Dr. and Mrs. W. E. Buhler of Rushville and Dr. and Mrs. L. W. Hinchman of Glenwood cooperated as hosts.

s/J. L. KIXMILLER, *Resident Secretary*.

**Wabash Valley Association.**—At the April 15 meeting of the Wabash Valley Veterinary Medical Association, **Dr. Joe Green**, state veterinarian, spoke on what the State Veterinary Department is doing to control brucellosis, tuberculosis, and vesicular exanthema, as well as what is expected from the practicing veterinarian.

Dr. and Mrs. W. E. Lamkin were hosts to the group.

s/J. L. KIXMILLER, *Resident Secretary*.

**Sixth District Association.**—On March 17, the Sixth District (Ind.) Veterinary Medical Association met at Veedersburg to hear **Dr. Mark Davenport**, of Armour and Company, discuss the use of ACTH in acetonemia in cattle.

s/J. L. KIXMILLER, *Resident Secretary*.

**Northwestern Association.**—The Northwestern Indiana Veterinary Medical Association met in Kentland on March 26. **Drs. E. Goetz** and **F. V. Washko**, Department of Veterinary Science, Purdue University, discussed sterility.

s/J. L. KIXMILLER, *Resident Secretary*.

**Michiana Association.**—The Michiana Veterinary Medical Association met on April 9, in South Bend, Ind. The guest speaker for the evening was **Dr. R. L. Anderes**, Kansas City, Mo., editor of *Veterinary Medicine*, who discussed veterinary medicine from a business angle, stressing the value of accurate hospital records.

s/BRUCE HOSTRAWSEY, *Secretary*.

## Iowa

**North Central Association.**—The North Central Iowa Veterinary Medical Association held its annual meeting on April 16, 1953, at the Warden Hotel, Fort Dodge, with a total of 110 in attendance.

The following speakers presented papers on the scientific session: **Drs. A. M. Orum**, Carthage, Ill.; **Frank Thorp, Jr.**, research professor, Michigan State College, East Lansing; **L. C. Payne**, Department of Physiology and Pharmacology, Iowa State College, Ames; **J. F. Knappenberger**, Ashe Lockhart, Inc., Kansas City, Mo.; **H. U. Garrett**, state veterinarian; **C. W. Brown**, U. S. BAI, Des Moines; and **Dr. S. Sharp**, Ute, president, Iowa Veterinary Medical Association.

Officers elected for the ensuing year are: Drs.

James D. Rhodes, Fort Dodge, president; E. R. Henning, Breda, president-elect; and B. J. Gray, Fort Dodge, secretary-treasurer. Members of the executive board are: Drs. R. H. Ahrens, Jewell; R. N. Brenny, Pocahontas; and Wayne Emerson, Eagle Grove.

s/B. J. GRAY, *Secretary*.

**Personal.**—Mr. Guy F. Hershey, traveler for Fort Dodge Laboratories, Inc., out of Cedar Rapids, for many years, is now retired. He has recently been hospitalized at St. John's Hospital, Springfield, Ill.

s/WAYNE H. THOMPSON.

## Maine

**State Association.**—At the January meeting of the Maine Veterinary Medical Association, the following officers were reflected; **Drs. Arlan Freeman**, Rumford, president; **Robert Ingham**, Waterville, vice-president; and **Stanford Merrill**, Augusta, secretary-treasurer. The following members were elected to the executive board: **Dr. Edward Moore**, Turner Center; **Philip Brown**, Belfast; and **James Elliott**, Bangor.

At the business session, with 40 members in attendance, **Drs. Edward M. Sullivan** and **Henry D. Bither** of Westbrook were elected to membership, and it was voted to contribute \$50 to the AVMA Research Fund.

On the scientific program, **Dr. Frank Vigue**, Springvale, spoke on clinical aides in determining the cause of bovine abortions; **Drs. Robert Monahan**, Brunswick (moderator); **F. Langdon Davis**, Augusta; **James Elliott**, Bangor; and **Grant Savage**, Waterville, presented a panel discussion on the distemper complex in dogs; and **Drs. Russell Abbott**, Rockland (moderator); **Dana Dingley**, Farmington; **John Woodcock**, Pittsfield; **C. William Hersey**, Fryeburg; and **Camille Gardner**, Lewiston, presented a panel discussion on fees in veterinary practice.

s/STANFORD MERRILL, *Secretary*.

## Massachusetts

**State Association.**—The regular monthly meeting of the Massachusetts Veterinary Association was held April 22 at the Hotel Beaconsfield, Boston. The guest speaker was **Dr. Walter F. Lever (M.D.)**, dermatologist of Boston, who discussed skin diseases in human beings which may also appear in animals.

s/C. LAWRENCE BLAKELY, *Secretary*.

## Minnesota

**Central Association.**—The Central Minnesota Veterinary Association met in Montevideo on March 3, 1953. The guest speakers were **Drs. R. M. Merrill** and **C. M. Stowe**, of the School of Veterinary Medicine, University of Minnesota, St. Paul. The committee on public rela-

tions discussed plans for making regular radio presentations through the facilities of local radio stations.

The following officers were elected: Drs. A. J. Schladweiler, Madison, president; V. K. Jensen, Montevideo, vice-president; V. F. Olson, Litchfield, secretary; and R. S. Kufrin, Benson, treasurer.

s/V. F. OLSON, *Secretary*.

**American Animal Hospital Association.**—The twentieth annual meeting of the American Animal Hospital Association was held at the Radisson Hotel, Minneapolis, on May 6-9, 1953.

The following guest speakers presented papers on the scientific program: **Drs. Mark W. Allam**, dean, School of Veterinary Medicine, University of Pennsylvania, Philadelphia; **Willard L. Boyd**, St. Paul, president of the AVMA; **Roger E. Brown**, School of Veterinary Medicine, Michigan State College, East Lansing; **George T. Edds**, Fort Dodge Laboratories, Inc., Fort Dodge, Iowa; **Richard C. Gaard** (M.D.), Fairview Hospital, Minneapolis; **B. F. Hoerlein**, School of Veterinary Medicine, Alabama Polytechnic Institute, Auburn; **L. G. Idstrom** (M.D.), diplomat for the American Board of Radiology, Swedish Hospital, Minneapolis; **William V. Lumb**, graduate college, University of Minnesota, St. Paul; **Clarence M. Penticuff**, Minneapolis; **Arthur H. Wolff**, Public Health Service, Cincinnati, Ohio; **Mr. Albert H. Allard**, Medical Division, Eastman Kodak Company, Rochester, N. Y.; and the following from the University of Minnesota faculty: **Drs. John N. Campbell**, **Donald H. Clifford**, **H. C. H. Kernkamp**, **Donald G. Low**, **Carl A. Rehfeld**, **M. H. Roepke**, **Francis A. Spurrell**, **John C. Watson** and **Greselda Wolfe**.

In addition to the above speakers, 28 member speakers also participated in the program. Members had the opportunity to visit the School of Veterinary Medicine at the University of Minnesota, and the Mayo Clinic in Rochester.

s/WAYNE RISER, *Secretary*.

**Veterinary Library Receives Gift from Women's Auxiliary of State Society.**—At the annual meeting of the Minnesota State Veterinary Medical Society, members of the Women's Auxiliary donated the sum of \$50 for the purchase of books for the library of the School of Veterinary Medicine. A gift of this sort is especially appreciated at this time when the library is expanding to meet the requirements of the new school. Since both staff and students greatly benefit by such a gift, this generous donation is gratefully acknowledged and much appreciated.

s/HENRY J. GRIFFITHS, *Resident Secretary*.

## Missouri

**Kansas City Association.**—The April 21 meeting of the Kansas City Veterinary Medical Association was held at the Continental Hotel. **Dr. H. C. Smith**, Allied Laboratories, Inc., Sioux City, Iowa, discussed leptospirosis and showed slides to illustrate his talk.

s/J. C. DAVIS, *Secretary*.

**Greater St. Louis Association.**—The officers of the Greater St. Louis Veterinary Medical Association for 1953 are Drs. Norbert Schmelzer, president; George L. Murphy, vice-president; H. S. Richards, treasurer; and Luther E. Fredrickson, secretary.

The Association meets the first Friday of the month at the York Hotel.

s/LUTHER E. FREDRICKSON, *Secretary*.

## New Jersey

**Northern Association.**—The Northern New Jersey Veterinary Medical Association has elected the following officers for 1953: Drs. Elliot Kaplus, Clifton, president; Robert R. Shomer, Teaneck, vice-president; and Seymour Lustig, Englewood, secretary-treasurer.

s/SEYMOUR LUSTIG, *Secretary*.

## New York

**New York City Association.**—The regular meeting of the Veterinary Medical Association of New York City, Inc., was held at the New York Academy of Sciences on April 1, 1953. **Dr. R. L. Rudy**, assistant professor, veterinary surgery, Ohio State University, Columbus, presented an illustrated paper on "Surgical Techniques in Dogs."

The following guests were introduced: Dr. David Barsky, Capt. Morris L. Povar, Drs. S. Dorfman, and E. F. Donovan.

There was no business meeting. Refreshments were served at the close of the meeting.

s/C. R. SCHROEDER, *Secretary*.

**Personal.**—Captain R. A. Lopez (COR '45), U. S. Air Force Reserve, returned to the United States April 2 after serving one and one-half years as a veterinary officer on the Korean front. While overseas, he served as command veterinarian for the Fifth Air Force and was in charge of the Canine Corps and the preventive medicine program for air force bases. Captain Lopez was awarded the Bronze Star Medal for meritorious service and the Air Medal for combat missions over North Korea. He plans to resume his veterinary practice in Westport as soon as he is released from service.

## Ohio

**Conference for Veterinarians.**—The twenty-second annual conference for veterinarians at the College of Veterinary Medicine, Ohio State

University, Columbus, was held April 15-16, 1953.

The following guest speakers participated in the program: **Drs. W. I. B. Beveridge**, professor of animal pathology, University of Cambridge, Cambridge, England; **C. E. DeCamp**, Pitman-Moore Co., Indianapolis, Ind.; **R. C. Glover**, Evanston, Ill.; **R. L. Knudson**, U. S. Bureau of Animal Industry, Columbus; **J. L. Krider** (Ph.D.), vice-president and director of feed sales, McMillen Feed Mills, Fort Wayne, Ind.; **J. Markowitz** (M.D.), University of Toronto, Toronto, Ont.; **J. A. McOwen**, Sunbury; **J. C. Shaw** (Ph.D.), University of Maryland, College Park, Md.; **C. C. Wagner**, Cleveland; and the following from the Ohio Department of Agriculture: **Drs. J. E. Doran**, **H. E. Goldstein**, **J. R. Hay**, and **A. R. Wagner**.

Faculty members who contributed to the program were **Drs. E. H. Bohl**, **E. J. Catcott**, **D. M. Chamberlain**, **H. L. Chute**, **C. H. Clark**, **C. R. Cole**, **C. D. Diesem**, **R. L. Farrell**, **L. C. Ferguson**, **H. F. Groves**, **J. H. Helwig**, **L. E. Johnson**, **D. O. Jones**, **F. J. Kingma**, **F. R. Koutz**, **W. R. Krill**, **R. E. Rebrassier**, **C. E. Robinson**, **R. L. Rudy**, **C. R. Smith**, **V. L. Sharp**, **W. G. Venzke**, and **Mr. E. R. Biggs**, Department of Physical Education.

*s/J. L. HELWIG, General Chairman.*

## Ontario

**Dr. Moynihan Honored on Retirement.**—Over 200 friends of Dr. William Moynihan gathered at a farewell dinner in Toronto on the evening of April 14, 1953, to pay tribute to him on the occasion of his retirement as officer in charge of the Ontario Province Health of Animals Division, Dominion Department of Agriculture, after forty-three years of service.

Dr. Moynihan, who was born in 1886 and received his veterinary degree from Ontario Veterinary College in 1910, had devoted his entire professional career to government service, most of it in the control of infectious diseases of animals, and had seen the work develop almost from its beginning with only a few staff members to its present high place with large numbers of full-time and part-time veterinary employees participating. He carried on control work in both the western and eastern provinces, mostly the latter. Under his supervision, the cattle in Ontario Province were started on the way to a tuberculosis-accredited status and he was largely instrumental in the successful completion of that work, as well as in other disease control programs of great importance to the cattle industry.

Fitting tributes were paid to Dr. Moynihan and his work by representatives from the livestock and meat industries and professional associations. Among these were Mr. Wm. P. Watson of the Provincial Department of Agriculture; Mr. George Clemons of the Dairy Livestock and Breeders Association; Mr. Sam Fos-

ter, Canadian National Exhibition; Dr. William Mitchell, Ontario Veterinary College; Dr. G. A. Edge, Ontario Veterinary Association; and Dr. J. G. Hardenbergh, American Veterinary Medical Association.

Presentations to Dr. Moynihan included a set of matched luggage by Mr. E. A. Miller, representing the Industrial and Development Council of Canadian Meat Packers, and a console-type television set by Dr. T. Childs, veterinary director general, on behalf of the staff of the Health of Animals Branch and Dr. Moynihan's many friends. Also presented to the guest of honor by Dr. Childs was a framed service scroll from the Dominion Department of Agriculture and a scroll containing the signatures of all those attending the dinner.

In replying to the tributes paid him, Dr. Moynihan spoke of the early days of his service and modestly gave credit for the accomplishments to his colleagues and staff members.

Dr. D. J. McLellan was master of ceremonies and introduced the speakers and a number of distinguished guests.

## STATE BOARD EXAMINATIONS

**Florida**—The Florida State Board of Veterinary Examiners will hold an examination on June 15-17, 1953, at the Everglades Hotel, Miami, Fla. Address inquiries to Dr. E. L. Matthews, Box 141, Palatka, Fla.

**Massachusetts**—The Massachusetts Board of Registration in Veterinary Medicine will hold examinations for registration in Massachusetts on June 25-27, 1953, at Amherst, Mass. The latest date for filing applications is June 15, 1953. Address inquiries to Dr. Ray S. Youmans, secretary, Board of Registration in Veterinary Medicine, Room 33, State House, Boston 33, Mass.

**Missouri**—The Missouri State Board of Veterinary Examiners will meet at the School of Veterinary Medicine, University of Missouri, Columbia, Mo., on June 3 and 4, 1953, for the purpose of conducting an examination of candidates for a license to practice in Missouri. For further information, address Dr. H. E. Curry, Secretary, Missouri State Board of Veterinary Examiners, Department of Agriculture, Jefferson City, Mo.

**Utah**—The Utah Veterinary Medical Examining Board will conduct examinations on June 29-30, 1953, in Room 314, State Capitol Building, Salt Lake City, Utah, for the licensing of veterinarians to practice in Utah. For further information and application blanks, address: Mr. Frank Lees, director of registration, 1419 East 17th South, Salt Lake City, Utah.

Due to the Volume Index in this issue, space is limited; therefore, deaths which would ordinarily have been reported in June will be published in the July, 1953, issue.

*at the Parke-Davis Exhibit*

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## COMING MEETINGS

Notices of Coming Meetings must be received by 4th of month preceding date of issue

- Wyoming Veterinary Medical Association. Annual meeting. Torrington, Wyo., June 7-8, 1953. Jo Browne, Box 960, Laramie, Wyo., secretary.
- Montana Veterinary Medical Association. Annual meeting. Bozeman, Mont., June 11-13, 1953. E. A. Tunnick, Bozeman, Mont., secretary.
- Idaho Veterinary Medical Association. Annual meeting. Burley, Idaho, June 15-16, 1953. A. P. Schneider, 2025 North 23rd St., Boise, Idaho, secretary.
- Utah Veterinary Medical Association. Annual meeting. Provo, Utah, June 18-19, 1953. Joe B. Thurman, 1407 South State St., Orem, Utah, secretary.
- Vermont Veterinary Medical Association. Annual conference for veterinarians. Prospect House, Lake Bomoseen, near Fair Haven, Vt., June 19-20, 1953. W. D. Bolton, University of Vermont, Burlington, secretary.
- Georgia Veterinary Medical Association. Annual meeting. Atlanta Biltmore Hotel, Atlanta, Ga., June 21-23, 1953. Chas. C. Rife, 420 Edgewood Ave., N. E., Atlanta, Ga., secretary.
- North Carolina State Veterinary Medical Association and South Carolina State Veterinary Medical Association. Joint meeting. Mayview Manor, Blowing Rock, N. Car., June 29-30, 1953. C. W. Young, Mocksville, N. Car., secretary, North Carolina Association.
- South Carolina State Veterinary Medical Association and North Carolina State Veterinary Medical Association. Joint meeting. Mayview Manor, Blowing Rock, N. Car., June 29-30, 1953. R. A. Mays, P. O. Box 1147, Columbia 1, S. Car., secretary, South Carolina Association.
- California State Veterinary Medical Association. Annual June meeting. Lafayette Hotel, Long Beach, Calif., June 22-24, 1953. Charles S. Travers, 3004 16th St., Room 208, San Francisco 3, Calif., executive secretary.
- Maritime Veterinary Associations. Joint conference. Mount Allison University, Sackville, N. B., June 23-25, 1953. J. F. Frank, Sackville, N. B., secretary, joint committee.
- Maryland State Veterinary Medical Association. Annual summer meeting. George Washington Hotel, Ocean City, Md., June 25-26, 1953. John D. Gadd, Cockeysville, Md., secretary.
- Missouri, University of. Annual short course for graduate veterinarians. School of Veterinary Medicine, University of Missouri, Columbia, Mo., June 29-30, 1953. Cecil Elder, chairman.
- Kentucky Veterinary Medical Association. Annual summer meeting. Seelbach Hotel, Louisville, Ky., July 8-9, 1953. T. J. Stearns, Room 216, Live Stock Exchange Bldg., Louisville, Ky., secretary.
- American Veterinary Medical Association. Annual meeting. Royal York Hotel, Toronto, Ont., July 20-23, 1953. J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill., executive secretary.
- Northwest Veterinary Medical Association. Annual meeting. Davenport Hotel, Spokane, Wash., Aug. 10-12, 1953. J. L. Ellis, Olympia, Wash., secretary.
- Colorado Veterinary Medical Association. Annual meeting. Greeley, Colo., Sept. 10-11, 1953. Paul D. Patridge, Rt. 1, Box 387-A, Golden, Colo., secretary.
- New York State Veterinary Medical Society. Annual meeting. Hotel Syracuse, Syracuse, N. Y., Sept. 14-16, 1953. J. S. Halat, 803 Varick St., Utica, N. Y., acting executive secretary.
- Alabama Annual Conference for Veterinarians. School of Veterinary Medicine, Alabama Polytechnic Institute, Auburn, Ala., Sept. 17-19, 1953. R. S. Sugg, dean.
- Purdue University. Annual short course for veterinarians. Purdue University, Lafayette, Ind., Oct. 7-9, 1953. L. M. Hutchings, chairman.
- Georgia Coastal Plain Experiment Station. Annual short course for veterinarians. Georgia Coastal Plain Experiment Station, Tifton, Ga., Oct. 12-13, 1953. Peter H. Langer, secretary.
- Pennsylvania State Veterinary Medical Association. Annual meeting. Roosevelt Hotel, Pittsburgh, Pa., Oct. 14-16, 1953. R. C. Snyder, Walnut St. and Copley Rd., Upper Darby, Pa., secretary.
- Eastern Iowa Veterinary Association. Annual Meeting. Hotel Montrose, Cedar Rapids, Iowa, Oct. 15-16, 1953. Wayne W. Thompson, Earlville, Iowa, secretary.
- South Dakota Veterinary Medical Association. Annual meeting. Cataract Hotel, Sioux Falls, S. Dak., Oct. 16-17, 1953. R. M. Scott, 2419 S. Main St., Sioux Falls, S. Dak., secretary.
- New England Veterinary Medical Association. Annual meeting. Hotel Viking, Newport, R. I., Oct. 18-20, 1953. C. Lawrence Blakely, 180 Longwood Ave., Boston 15, Mass., secretary.
- New York State Veterinary College. Annual conference for veterinarians. New York State Veterinary College, Cornell University, Ithaca, N. Y., Jan. 6-8, 1954. W. A. Hagan, dean.

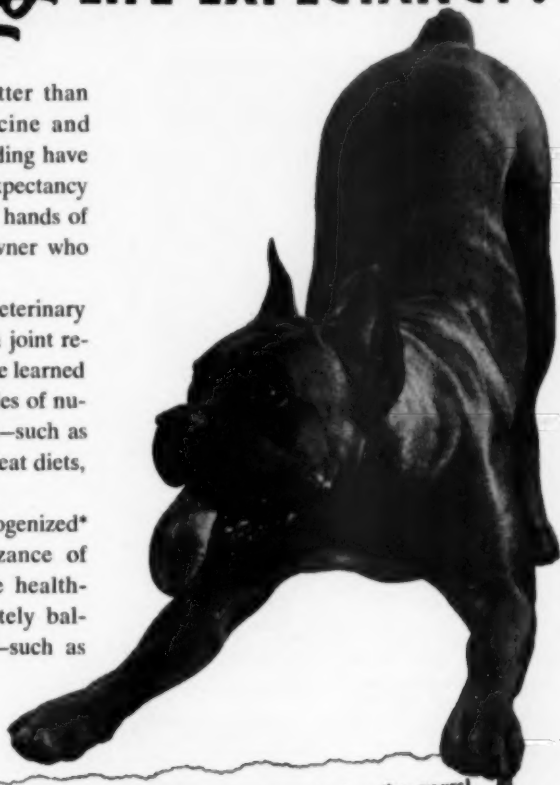
(Continued on p. 28)

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6542 Westfield Boulevard  
 INDIANAPOLIS 20, INDIANA

(COMING MEETINGS—continued from p. 26)

**Regularly Scheduled Meetings**

Bay Counties Veterinary Medical Association, the second Tuesday of each month. David E. Madsen, 44 South 4th St., San Jose, Calif., secretary.

Cedar Valley Veterinary Association, the second Monday of each month (except July and August) at Black's Tea Room, Waterloo. F. E. Brutsman, Traer, Iowa, secretary.

Central California Veterinary Medical Association, the fourth Tuesday of each month. W. E. Smith, 516 Oatman, Sanger, Calif., secretary.

Central Carolina Veterinary Medical Association, the second Wednesday of each month at 7:00 p.m. in the O'Henry Hotel in Greensboro. Mr. Earl D. Adams, Greensboro, N. Car., secretary.

Chicago Veterinary Medical Association, the second Tuesday of each month. Robert C. Glover, 1021 Davis St., Evanston, Ill., secretary.

Coastal Bend Veterinary Association (Texas), the second Wednesday of each month. J. E. Hoban, 4301 S. Port Ave., Corpus Christi, Texas, secretary.

Coon Valley Veterinary Association, the second Wednesday of each month, September through May, at the Bradford Hotel, Storm Lake, Iowa. J. R. Rosdail, Pomeroy, Iowa, secretary.

Cuyahoga County (Cleveland, Ohio) Veterinary Medical Association, the first Wednesday of each month—September through May (except January)—at 9:00 p.m. at the Carter Hotel, Cleveland, Ohio. Roger W. Grundish, 4217 Mayfield Road, South Euclid 21, Ohio, secretary.

East Bay Veterinary Medical Association, bi-monthly, the fourth Wednesday. Robert Clemens, 23352 Orchard, Hayward, Calif., secretary.

Fayette County Veterinary Association, Iowa, the third Tuesday of each month, except in July and August, at Pa and Ma's Restaurant, West Union, Iowa. Donald E. Moore, Box 178, Decorah, Iowa, secretary.

Florida, North-East Florida Veterinary Medical Association, the second Thursday of each month, time and place specified monthly. J. O. Whiddon, 829 San Marco Blvd., Jacksonville, Fla.

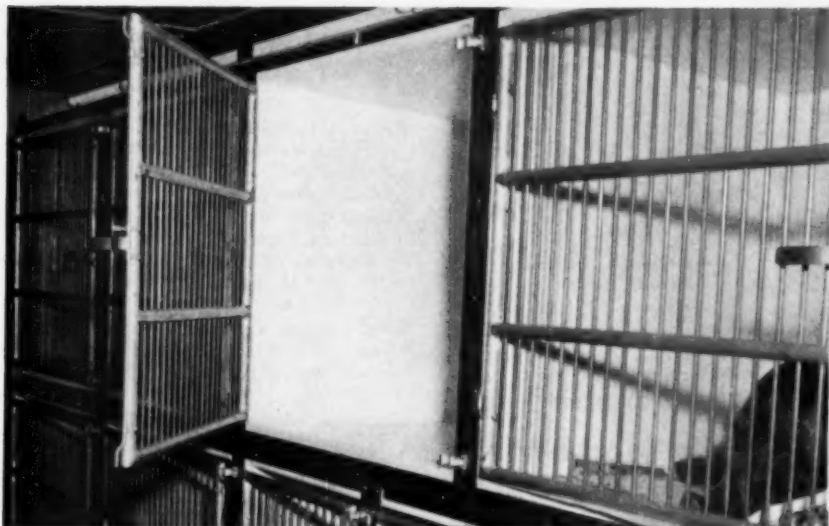
Greater St. Louis Veterinary Medical Association, the first Friday of the month at the York Hotel, Sixth and Market Streets. Luther E. Fredrickson, Room 11, Municipal Courts Bldg., St. Louis, Mo., secretary.

Houston Veterinary Medical Association, Houston, Texas, the first Thursday of each month.

(Continued on p. 30)

# PRESENTING...

## *The Ultimate in Animal Cages*



NOW AVAILABLE AFTER YEARS OF RESEARCH AND MONTHS OF TESTS UNDER ACTUAL OPERATING CONDITIONS, A GLASS FIBER RE-INFORCED PLASTIC CAGE BUILT TO LAST A LIFETIME.

### AVAILABLE IN 3 STOCK MODELS

**The R-1** — Floors slope toward back, eliminating the necessity of trays or troughs. Available in sizes 33"x 33"x29" deep, 45" wide x 33" high and 29" deep and 24"x24"x28" deep.

**The R-2** — Floors slope toward front. Gutters furnished upon request. Sizes 36"x36"x28" deep and 24"x24"x28" deep.

**The R-3** — Flat floors. Available with plastic trays. Sizes 36"x36"x28" deep and 24"x24"x28" deep.

Cages also made in sizes to fit your particular requirements at additional cost. Note—Since first presenting this ad, additional sizes are now available in all models.

### OTHER OUTSTANDING PRODUCTS BY KIRSCHNER:

- Intramedullary fracture equipment
- Kirschner external fracture equipment
- Mason meta splints
- Gordon extenders
- Thomas splints
- Improved Zephyr small animal dryers
- Life-time aluminum cage doors

### NOTE THESE EXCLUSIVE FEATURES:

- Seamless
- Waterproof
- Stain proof
- Highly scratch resistant
- All cave interior corners

The interior surface of these plastic cages is white in color, glass smooth and requires no painting. They are made in individual units so may be arranged in any manner desired to form batteries. Available with or without the Kirschner life-time aluminum door.

WRITE FOR FULL DETAILS

*Kirschner*

MANUFACTURING CO.  
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# Hill's Prescription Diets for DOGS and CATS



Available only to  
Graduate Veterinarians



# 4

## SPECIAL FORMULAE

- k/d—for Nephritic Conditions
- r/d—for Obesity Correction
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## Hill's U. S. Inspected Horse Meat



Nature's food for dogs and cats. Feed raw or it can be mixed raw with dry food or cereal.



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For general hospital feeding, use Hill's Dog Food with the Seal of Approval of A.V.M.A. and A.A.H.A. "Tested and Approved."

(Inquiry form for graduate veterinarians only) A  
HILL PACKING CO., Box 148, Topeka, Kan.

- Send information on therapeutic feeding ☐
- Send information on other Hill products ☐

NAME.....  
ADDRESS.....

(COMING MEETINGS—continued from p. 28)

Edward Lepon, Houston, Texas, secretary-treasurer.

Illinois Valley Veterinary Medical Association, the second Sunday evening of even-numbered months at the Jefferson Hotel, Peoria, Ill. S. M. McCully, Lacon, Ill., secretary.

Indiana Tenth District Veterinary Medical Association, third Thursday of each month. L. A. Snider, New Palestine, Ind., secretary.

Jefferson County Veterinary Society of Kentucky, Inc., the first Wednesday evening of each month, in Louisville or within a radius of 50 miles. E. M. Lang, 716 E. Broadway, Louisville, Ky., secretary.

Kansas City Small Animal Hospital Association, the first Monday of each month, at the Hotel Continental. T. M. Eagle, Parkville, Route 2, Mo., secretary.

Kansas City Veterinary Medical Association, the third Tuesday of each month, in the Hotel Continental, 11th and Baltimore, Kansas City, Mo. K. M. Curtis, 70 Central Ave., Kansas City 18, Kan., secretary.

Kern County Veterinary Medical Association, the first Thursday of each month. Richard A. Stiern, 17 Niles St., Bakersfield, Calif., secretary.

Keystone Veterinary Medical Association, the Philadelphia County Medical Society Building, 301 S. 21st Street, Philadelphia, Pa., on the fourth Wednesday of each month. Raymond C. Snyder, 39th and Woodland Ave., Philadelphia 4, Pa., secretary.

Kyowva Veterinary Medical Association, the second Thursday of each month in the Hotel Prichard, Huntington, W. Va., at 8:30 p.m. Karl Mayer, 1531 Fourth Ave., Huntington, W. Va., secretary.

Maricopa County Veterinary Association, the second Tuesday of each month. Charles J. Prchal, 1722 East Almeria Road, Phoenix, Ariz., secretary.

Metropolitan New Jersey Veterinary Medical Association, the third Wednesday evening of each month from September through May, at the Academy of Medicine of Northern New Jersey, 91 Lincoln Park South, Newark, N. J. Myron S. Arlein, 2172 Millburn Ave., Maplewood, N. J., secretary.

Michiana Veterinary Medical Association, the second Thursday of each month, at Hotel LaSalle, South Bend, Ind. Bruce Hostrawser, 2621 Mishawaka Ave., South Bend, Ind., secretary.

Michigan, Southeastern Veterinary Medical Society. Herman Kiefer Hospital, Detroit, Mich., the second Wednesday of each month from October through May.

(Continued on p. 32)

**Veterinarians handle up to  
30% more calls daily with...**

## **Motorola 2-Way Radio**



### **Instant Contact En Route Saves Time, Increases Calls, Cuts "Dead" Mileage**

Now you can find *extra hours* every day using Motorola radio for contact with home or office. Start your daily rounds earlier... set up schedules *en route*... radio first-aid instructions to clients... and handle up to 30% more calls. No tests to pass, no technical skill needed, just push a button and you're on the air!

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the start you get sure-action communication with long-lasting reliability. Motorola guarantees superior performance... obsolescence-proof design... time-tested durability. Write today for this prompt, friendly engineering service.

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# Recommend STERLING TRACE-MINERAL BLUSALT

THROUGHOUT THE COUNTRY, local feed sometimes lacks essential trace minerals. Where this is true, field reports show that when farm animals are given STERLING Trace-Mineral BLUSALT they produce better, grow bigger faster, bring more profits. Sterling Blusalt provides *vital salt* to aid digestion of protein, carbohydrates and fats *plus* these trace minerals:

**Cobalt**—essential for Vitamin B<sub>12</sub>—guards against loss of appetite, permits maximum body gains and helps maintain normal level of hemoglobin in the blood.

**Manganese**—necessary for successful growth, reproduction, lactation and bone development.

**Iodine**—to help prevent simple goiter.

**Iron**—essential as part of hemoglobin to every organ and tissue of the body.

**Copper**—necessary with iron for hemoglobin formation.

**Zinc**—growth producing and a part of enzymes.

Recommend that Blusalt be kept before farm animals at all times—and mixed with feed according to directions on the bag.



## STERLING TRACE-MINERAL BLUSALT

100-lb. bags  
50-lb. blocks  
4-lb. tins

International Salt Co., Inc.  
Scranton, Pa.

(COMING MEETINGS—continued from p. 30)

Mid-Coast Veterinary Medical Association, the first Thursday of every even month. C. Edward Taylor, 2146 S. Broad St., San Luis Obispo, Calif., secretary.

Milwaukee Veterinary Medical Association. Wisconsin Humane Society, 4150 N. Humbolt Ave., Milwaukee, Wis., the third Tuesday of each month. Kenneth G. Nicholson, 2161 N. Farwell Ave., Milwaukee, Wis., secretary.

Mobile-Baldwin Veterinary Medical Association, the first Tuesday of each month at the Hotel Admiral Simmes, Mobile, Ala. C. Eric Kennedy, Mobile, Ala., secretary.

Monterey Bay Area Veterinary Medical Association, the third Wednesday of each month. C. Edward Taylor, 2146 South Broad St., San Luis Obispo, Calif., secretary.

New Castle County Veterinary Society, the second Wednesday of each month at 9:00 p.m. in the Hotel Rodney, Wilmington, Del. Harold Roberts, Paper Mill Road, Newark R3, Del., secretary.

New York City, Veterinary Medical Association of, the first Wednesday of each month at the New York Academy of Sciences, 2 East 63 St., New York City. C. R. Schroeder, Lederle Laboratories, Inc., Pearl River, N. Y., secretary.

Northern New Jersey Veterinary Association, the fourth Tuesday evening from September through June, at the Casa Mana Restaurant, Cedar Lane, Teaneck, N. J. Robert R. Shomer, 1680 Teaneck Road, N. J., secretary.

Northern San Joaquin Valley Veterinary Medical Association, the fourth Wednesday of each month. Tom Hagan, Gen. Del., Escalon, Calif., secretary.

Oklahoma County Veterinary Medical Association, the second Wednesday of every month except July and August. W. C. Schilb, 4312 N. W. 23rd St., Oklahoma City, Okla., secretary.

Orange Belt Veterinary Medical Association, the second Monday of each month at 7:00 p.m. in the Antlers Hotel, San Bernardino, Calif. R. E. Hoadley, Coachella, Calif., secretary.

Orange County Veterinary Medical Association, bi-monthly. Donald E. Lind, 2643 N. Main, Santa Ana, Calif., secretary.

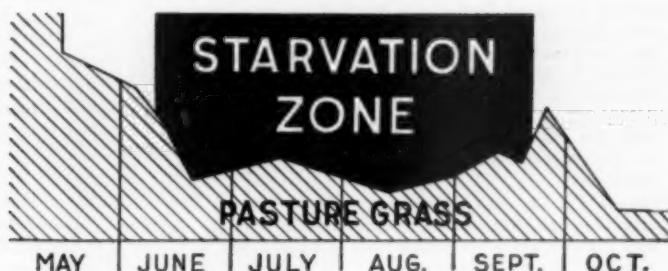
Peninsula Veterinary Medical Association, the third Monday of each month. P. H. Hand, Box 1035, Millbrae, Calif., secretary.

Piedmont Veterinary Medical Association, the last Friday of each month at 7:00 p.m. in Mull's Motel in Hickory, N. Car. G. V. McCranie, Hickory, N. Car., secretary.

Pima County (Arizona) Veterinary Medical Association, the third Wednesday of each month,

(Continued on p. 34)

# Crime doesn't pay



Farmers can't get by with murder and make money in the dairy business. Summer starvation sends good cows to slaughter in less than 6 years when they could, and should, be in the milk line for more than 10.

Dried up pasture (from middle June to late September) won't maintain the dam's body, make a profitable milk flow, and build a calf. Force feeding, in the fall, can't rebuild a half-starved herd.

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Recommend Vitamineral Supplement summer feeding for increased herd health, greater production, potent reproduction.

**Vitamineral Products Co. Peoria 3, Illinois**

**Via-D-Mineral — Con-o-mineral — Viamineral — Viaferm — "A to Z"**

**Professional supplements for the veterinary profession since 1915**



- in Tucson. R. W. Adami, 2103 S. 6th Ave., Tucson, Ariz., resident secretary.
- Portland (Oregon) Veterinary Medical Association, the second Tuesday of each month, in the Auditorium of the Upjohn Company. Victor T. Oliver, 9705 S.W. Barbur Blvd., Portland 19, Ore., secretary.
- Redwood Empire Veterinary Medical Association, the third Thursday of each month. H. M. Strandberg, 203 D St., Petaluma, Calif., secretary.
- Roanoke-Tar (N. Car.) Veterinary Medical Association, the first Friday of each month, time and place specified monthly. C. B. Randall, Kinston, N. Car., secretary.
- Sacramento Valley Veterinary Medical Association, the second Wednesday of each month. S. M. Foster, 430 College, Woodland, Calif., secretary.
- Saginaw Valley Veterinary Medical Association, the last Wednesday of each month. F. Ferguson, 1702 S. Dort Highway, Flint, Mich., secretary.
- San Diego County Veterinary Medical Association, the fourth Tuesday of each month. Warren J. Dedrick, 904 S. Lemon, El Cajon, Calif., secretary.
- Santa Barbara-Ventura Counties Veterinary Medical Association, Friday evenings every

- sixth week. Dee Wodars McDermott, 5879 Hollister, Coleta, Calif., secretary.
- Southern California Veterinary Medical Association, the third Wednesday of each month. R. W. Sprowl, 11756 San Vicente Blvd., Los Angeles 49, Calif., secretary.
- South Florida Veterinary Society, the third Tuesday of each month, at the Seven Seas Restaurant, Miami, Fla. E. A. Majilton, 1093 N. E. 79th St., Miami, Fla., secretary.
- Tulsa Veterinary Medical Association, the third Thursday of each month, in Director's Parlor of the Brookside State Bank, Tulsa, Okla. John Carnes, Muskogee, Okla., secretary.

### Foreign Meetings

- Fifteenth International Veterinary Congress. Stockholm, Sweden, Aug. 9-15, 1953. Dr. L. de Blicke, Soestdijkseweg 113N., Bilthoven, Netherlands, secretary, Permanent Committee. (U. S. Committee: Dr. W. A. Hagan, N. Y. State Veterinary College, Ithaca, N. Y., chairman; Dr. J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill., secretary.)
- Sixth International Congress for Microbiology. Città Universitaria, Rome, Italy, Sept. 6-12, 1953. G. Sanarelli, Città Universitaria, Rome, Italy, secretary.

## STRONTIUM MEDICAL APPLICATOR

*...for Beta Ray Therapy*

Tracerlab's unique Strontium Medical Applicator is a simple, compact instrument which allows beta rays to be used in the treatment of such eye conditions as corneal inflammatory lesions of dogs and superficial ocular neoplasms of horses and cows.\*

The applicator's source of beta radiation, Strontium-90, has a half life of about twenty-five years and gives a dosage rate of between 35 and 45 Roentgens-beta-equivalent per second at the surface of the applicator. A 4" D. x 1/4" sliding plastic shield protects the user's hand. The applicator is housed in a walnut case having a source shield; a second, portable shield is provided to hold the instrument when out of the case.

The standard RA-1A Strontium Applicator contains a forty millicurie source, but may be ordered with strengths of up to one hundred millicuries, upon approval of the United States Atomic Energy Commission.

We will be happy to send a copy of "Beta Ray Therapy in Ocular Diseases of Animals" on request and to supply appropriate A.E.C. forms with instructions for completing them.

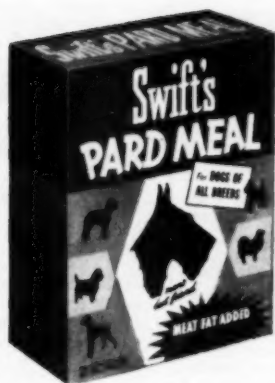
\* Beta Ray Therapy in Ocular Diseases of Animals, Catcott, et al; Journal A.V.M.A., March, 1953; p. 172-175.



Photos - Jru. A.V.M.A., March '53

**Tracerlab®**  
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**W**HO would believe what we say about this new dog meal? What dog feeder, experienced for years with dry dog foods, would believe that the new Swift's Pard Meal was a dry food that dogs would positively *like* to eat?

Yet it is just that. It's been tested and tested and proven. It's the dog meal with **THE FLAVOR DOGS CAN'T RESIST**. It's the dog meal with an appetite appeal such as you didn't believe there'd ever be.

Swift's Pard Meal contains extra

amounts of rich meat-fat for super energy and fuller nutrition. It's a kernel-type food, and homogenized. It won't flake or powder, and won't turn rancid. It's a complete diet—a dog needs nothing more.

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### Wanted—Veterinarians

Assistant wanted for mixed country practice, northern Northeast; 80% large animals. Must be graduate of recognized school and willing worker. Address "Box G 10," c/o JOURNAL of the AVMA.

Veterinarian wanted for permanent position on staff of an excellently equipped hospital serving a busy mixed practice in the Southeast. Give professional qualifications. Will answer all letters and return any photos. Address "Box F 4," c/o JOURNAL of the AVMA.

Able veterinarian wanted to take full charge of busy small animal hospital, New York State. Owner in service. Opportunity for financial gain. Comfortable apartment included. Address "Box C 8," c/o JOURNAL of the AVMA.

Public health veterinarian wanted as an assistant chief of Veterinary Public Health Services, Department of Health and Hospitals, Denver, Colo. Requires two or more years of experience in public health, or a combination of public health with research, teaching, or practice. Must have ability and knowledge to supervise activities in broad Veterinary Public Health Program. Requires Colorado license or ability to obtain one. Vacation and sick-leave provisions plus average of \$.07 per mile for use of car. Salary open—dependent on qualifications of applicant. Please submit full details and acceptable salary along with complete qualifications. Write to Chief, Veterinary Public Health Services, 659 Cherokee St., Denver, Colo.

Veterinarian wanted for small animal practice. Permanent position with excellent advancement possibilities. Located in southern Connecticut. Write complete history. Address "Box H 7," c/o JOURNAL of the AVMA.

Wanted veterinarian—modern clinic with facilities for 35 small animals and any laboratory work desired, plus separate large animal hospital. Large animal work diversified with hogs, feeding cattle,

(Continued on p. 38)

## in "durst"... shows dramatic results in neuromuscular dysfunction in small animals

"Results are from good to excellent without undesirable side reactions."<sup>1</sup>

Many hopeless cases have responded amazingly to treatment with Physotropin. Acting as a cholinesterase inhibitor, Physotropin relieves pain due to muscle spasm. It has been reported<sup>2</sup> as being used successfully in the following conditions: rheumatoid arthritis, inflammation of spinal cord, intervertebral and cervical disc injury, atrophy of muscles following injury, myasthenia, ventricular dropsy, and as routine following fracture repairs. Used in solution for immediate results and in tablet form as a maintenance dose. Try it in the next case where it is applicable.

<sup>1</sup> Elting, S. A. and DeCamp, D., Vet. Med., November 1950.

<sup>2</sup> Ibid.

Tablet containing:

Physostigmine Salicylate 0.5 mg (1/120 gr.)  
Atropine Sulfate 0.15 mg (1/400 gr.)

Sterile, isotonic solution containing:

Physostigmine Salicylate 1.0 mg per cc.  
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SUPPLIED:

Physotropin Solution;  
10 cc. Rub-R-Top Vials.

Physotropin  
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**Generations of success  
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**AND IT'S NOT SURPRISING!** For Friskies—a true-type meal backed by Albers 50 years' experience in animal nutrition—has been fed successfully and thoroughly tested with generations of dogs!

**FRISKIES** combines 19 separate, high-quality ingredients... chief of which is meat meal and bone meal...in a complete food that provides variety at every meal. Watch how your dogs enjoy its "meaty" smell and taste!



**TESTED FOR GENERATIONS!** Friskies — based on Albers 50 years' experience in animal nutrition — has been checked and tested on dogs of all sizes and types. At the Friskies Kennels on the famous Carnation Milk farm, generations of healthy, happy dogs have been raised on a diet of Friskies alone.



**FRISKIES CUBES...** in the same famous formula as meal...are crunchy, bite-sized morsels that exercise your dog's teeth and gums. No mixing is required. Nothing to add—not even water!

Meal and Cubes in 2, 5, 10, 25 and 50-Lb. Sizes.

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CONTAIN CHLOROPHYLLIN  
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**KEEP YOUR DOG  
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Throughout the dairy regions, more and more veterinarians are realizing that when they dispense MASTICS P & S for mastitis control and instruct farmers in the necessary sanitary procedures, it invariably means repeat business. Why do the farmers come back for more... over and over again?



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There is no better form of treatment known for the control of mastitis than the combination of penicillin and dihydrostreptomycin, such as contained in MASTICS P & S. And nothing surpasses penicillin for treating staphylococcal infections.



A new dosage form of MASTICS P & S is now available, with greatly increased potency—100,000 units of penicillin and 50,000 micrograms of dihydrostreptomycin in each individually foil-wrapped bougie.



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(CLASSIFIED ADS—continued from p. 36)

and lambs, plus grade-A milkshed dairies. Very discriminating clientele, well versed, and demanding the best in service and diagnosis. Future depends strictly on the man. Address "Box H 4," c/o JOURNAL of the AVMA.

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Veterinarian wanted as assistant in small animal practice. Give full particulars first letter. New York state license or ability to qualify for examination. Dr. Alexander Slawson, 2414 Amsterdam Ave., New York 33, N. Y.

(Continued on p. 40)

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Experienced veterinarian wants position in Public Health work. Age 30, married, good references. Will receive master of public health degree in June from an A.P.H.A.-approved university. Address "Box G 28," c/o JOURNAL of the AVMA.

Six years' experience in small animal medicine, surgery, and hospital management. Graduate of an approved school, 35 years of age, married, draft

exempt, reliable, no bad habits. Would like to associate with progressive practitioner where there is a future. Prefer Arizona, California, or Florida, but will consider other locations. Wife's health is reason for changing locations. Give full particulars in first letter. Address "Box G 32," c/o JOURNAL of the AVMA.

Experienced recent Texas graduate desires to purchase or become partner in a good small animal or mixed practice in Texas. Can make substantial down payment. Address "Box H 2," c/o JOURNAL of the AVMA.

College girl interested in veterinary medicine would like summer job as assistant to veterinarian. Salary not important; experience wanted. Address Box 654, N. J. C., New Brunswick, N. J.

Very capable young veterinarian wants position. Broad experience in small and large animals. German graduated, good English, best of references. Excellent scientific background. Address "Box H 9," c/o JOURNAL of the AVMA.

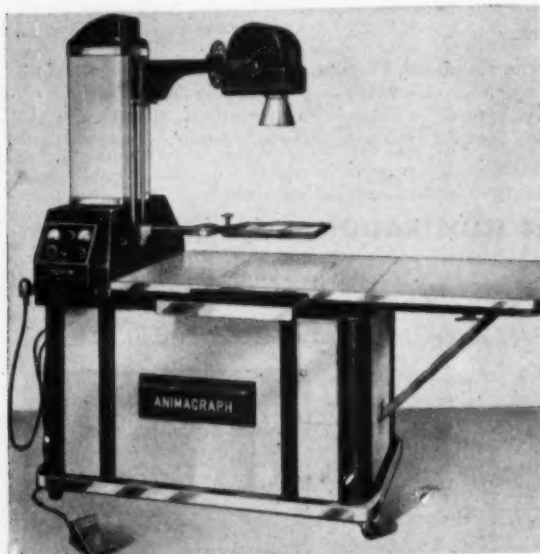
Veterinarian, graduated Switzerland, 1948, wants job as assistant in small animal practice. Age 35, single, six months in U. S.; speaks fair English. Ready to start in July. Address Dr. S. Antic, 11966 Ventura Blvd., Studio City, Calif.

(Continued on p. 46)

40 years of service to the veterinary field



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The only complete x-ray machine designed from the ground up for the exclusive use of the veterinarian.

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SMALL ANIMAL HOSPITALS  
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Dr. ....  
(Please Print)

Address .....

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(City and State)

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## PREPARATIONS VETERINARY

A NITROFURAN PRODUCT

*Wide-Spectrum Antibacterial Agent*

*Effective in*  
**PUS, BLOOD,  
MILK and  
SERUM**

### INDICATIONS

traumatic wounds	vaginitis
burns	metritis
ulcers	retained placenta
fistulas	otitis
gangrene	pink eye
eczema	bovine mastitis
porcine necrotic enteritis	

### HOW SUPPLIED

#### *Topical*

**Furacin Solution Veterinary 0.2%**—rubber stoppered bottles of 500 cc., for use in mastitis. Also 1 pt. and 1 gal. bottles with screw caps.

**Furacin Dressing Veterinary 0.2%**—4 oz. and 1 lb. jars.

**Furacin Dressing Veterinary with Anesthetic 0.2%** (butacaine sulfate 0.5%)—1 lb. jars.

**Furacin Suppositories Veterinary (large) 0.4%**—box of 12, 20 Gm. each, foil wrapped.

**Furacin Soluble Powder Veterinary (0.2%)**—10 Gm. plastic "puff" bottles.

**Furacin Ear Solution Veterinary (0.2%)**—dropper bottles of 1 fl. oz.

**Furacin-Penicillin Gel Veterinary (2% Furacin and 13,333 units procaine penicillin G per cc.)**—rubber capped vials of 100 cc.; applicator tubes of 7.5 cc., boxes of 12.

#### *Oral*

**Furacin Suspensoid Veterinary (3.25% Furacin crystals)**—bottles of 1 pt. and 1 gal.

Write for booklet and prices. Furacin preparations are more economical in quantity lots.

Furaspor,\* another nitrofurantoin product, is available for treatment of dermatomycoses, such as ringworm. Supplied in 1 pt. and 1 gal. bottles.

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**CLIPS**  
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TABLETS**

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EACH TABLET CONTAINS	{	Dihydrostreptomycin Base	
		(as sulfate)	50 mg.
		Phthalylsulfacetamide	2.5 Gr.
		Sulfacetamide	2.5 Gr.
		Sulfathiazole	1.0 Gr.
		Sulfanilamide	1.0 Gr.

**Austin LABORATORIES, Inc.**  
1413 Hertel Ave., Buffalo, N. Y.

## Correspondence

The following letters, sent to us by Dr. Ludins, we believe will be of interest to JOURNAL readers.—ED.

Nov. 21, 1952

Dr. G. H. Ludins  
Hartford, Conn.

Dear Dr. Ludins:

I enjoyed your article on "The Golden Rule in Veterinary Practice" [the JOURNAL, Nov., 1952, pp. 345-346] very much, as the veterinarians in Ventura County are almost as solid as you are in Hartford. It is a very enjoyable situation and we don't see why all districts can not be united as we are.

Our one problem is how to handle charges to the other fellow's client that you take care of while he is away. Our method in almost all cases has been to take care of the patient and have the client pay his own veterinarian for the call. If we use expensive drugs we repay each other. We think that this gives the client the idea he should not keep coming to you, but to go back to his original veterinarian.

Personally, I do not think this is the correct answer as I leave [the county] more than anyone else in the county and it does take more [of the] time of the other fellows to take care of my place and business. I think there should be some kind of remuneration to the one taking over.

I would like to find out how your group works the collections on the other fellow's work when you go to his hospital to cover or his clients are sent to you. An early reply will be greatly appreciated as we are having a meeting in about ten days.

Yours truly,  
s/E. H. Houchin, D.V.M.

Dr. E. H. Houchin  
Ventura, Calif.

Nov. 25, 1953

Dear Doctor:

It is really gratifying to me to know that my article has aroused so much interest. I have received a number of communications from various parts of the country, and I hope the seeds we have sown will bear fruit. Your Ventura group should inspire the formation of similar groups in your section.

As to the fee situation, we have handled it

(Continued on p. 44)

**WHITE'S**

**ANIMAL  
CASTRATION**

A new textbook for TEACHERS, STUDENTS and PRACTITIONERS.

**Price \$7.50**

For sale by book dealers, also by the Author, George Ransom White, M.D., D.V.M., P. O. Lock Box 901, Nashville, Tennessee.

*Announcing . . . . .* The introduction into the United States of

**OTRHOMIN WEIDNER**

(D.P. and other Patents)

**a radically new broad-spectrum chemotherapeutic for use in  
all domestic animals**

**Indications** — all diseases caused by streptococci, staphylococci, coli bacteria, paratyphoid organisms and allergic conditions but, particularly, all acute diarrheas. In coli calf scours and septic enteritis of newborn pigs OTRHOMIN should also be used prophylactically. Further special indications are "winter dysentery" in cattle, swine enteritis, swine influenza, pyometra, metritis, vaginitis, retention of placenta (for complete deodorizing, locally, and/or orally and parenterally), mastitis and udder edemas in all animals (*orally or parenterally, not locally*).

OTRHOMIN Weidner is also being used in human medicine in various diseases and especially in mastitis. No germ resistance as in penicillin treatment.

The average percentage of bacteriological mastitis cures is 84.4%, and the average percentage of clinical recoveries is considerably higher. Experience in such dairy countries as Switzerland and Holland proves that OTRHOMIN therapy does not interfere with cheese-making.

In chronic mastitis with extensive indurations, no restoration of tissues to normal may be expected from OTRHOMIN therapy.

OTRHOMIN Weidner is the only veterinary medicament in the world which increases the GAMMA GLOBULIN fraction of blood serum, thus also deriving its effectiveness from a modern medical principle. The increase in GAMMA GLOBULIN represents the increase of the defensive powers of the organism.

Nontoxic, safe even in larger doses, and economical to use.

Supplied as powder (250.0 gram jars), 2.0 grams halved tablets (bottles of 100), uterine bolus-tablets (bottles of 20) and sterile, stabilized solution for injection (rubber stoppered bottles of 100 cc.).

Available after July 1, 1953. Literature available on request.

**Previous Introductions . . .**

COECOLYSIN Bengen, the only veterinary medicament containing the unknown substance (called peristaltic hormone in human medicine), produced in the intestinal wall itself. For functional stomach and intestinal disturbances in ALL ANIMALS, for rumen paresis, indigestion and tympanites in CATTLE, Coecolysin Bengen is the modern answer. It is also recognized as a COLIC medicament for HORSES.

For best effects, COECOLYSIN injection must be repeated on time. *You cannot overdose! It increases peristalsis but not the tonus.*

**ELECTROMAGNETIC METAL DETECTOR** — a long waiting list of orders is the best proof of this precise and very sensitive hand-made instrument. Two models: with optical and with acoustical indicators (headphones); same price. In suitable carrying case.

**RUMENOTOMY DEVICE** and **FLEXIBLE EMBRYOTOME**, Swiss products, conclude the list but lead in fine craftsmanship and value as far as the practicing veterinarian is concerned. Order from your veterinary supply dealer or directly.

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*You are cordially invited to visit our booth at the AVMA Annual Convention in Toronto.*

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(Inquiries from distributors invited)

here in a slightly different manner. If a colleague's client visits our office, we collect and retain the fee, but urge the client to return to the colleague as soon as he is available. If we cover at a colleague's hospital, the fee is ordinarily collected and retained for him by his staff. In this way, no extensive bookkeeping is needed, and as I said in the article, it will usually balance itself over a period of time.

The point is, no matter how it is done, it is the spirit that counts. It does indeed build up a feeling of solidarity and fellowship, and that is the one end we desire.

Very sincerely,  
s/G. H. Ludins, D.V.M.

• • •

April 1, 1953

Dear Dr. Aitken:

Your recent editorial on Cholera Vaccinating Conundrum has been read with more than usual interest, but I need additional information on the exact meaning of the names applied to the different forms of "virus," and especially to that listed under "Method II," on page 320 of the April, 1953, issue. . . . I have listed eight names of virus picked from the literature, and while I believe I know the meaning of most of them, I am still in doubt over No. 2.

- 1) Virulent virus
- 2) Attenuated virus vaccine

- 3) Modified virus vaccine
- 4) Lapinized virus vaccine
- 5) Active virus
- 6) Inactivated virus (Boynnton)
- 7) Inactivated virus (Crystal Violet)
- 8) Active lapinized virus (Baker)

Your assistance will be highly appreciated.

Sincerely Yours,

s/D. H. Udall.

We endorse your complaint about the confused terms used for hog cholera vaccines. However, the term used for Method II, which you refer to, should have been "chemically inactivated virus vaccine."

The vaccine used in Method III might be called "modified live virus vaccine, porcine origin," and the vaccine used in Method IV, "modified live virus vaccine, lapin (rabbit) origin."

However, these terms are too long and awkward.

There will be other new vaccines which will further complicate the terms, so when they are better established, new, more brief terms should perhaps be adopted.—W.A.A.

• • •

Feb. 5, 1953

Gentlemen:

I am in receipt of a letter dated Jan. 28, 1953, from a few members of the \_\_\_\_\_ Veterin-

(Continued on p. 50)

## Natural Calcium Phospho Carbonate

with Vitamin D<sub>2</sub>

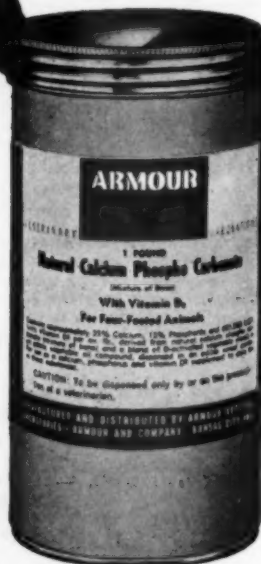
### For Supplementary Feeding in Diets Low in Calcium, Phosphorus, and Vitamin D<sub>2</sub>

Natural Calcium Phospho Carbonate has been produced from organic sources in a definite particle size. This particle size makes possible a high degree of assimilation (98% in controlled experiments).

It provides calcium and phosphorus in their natural or optimum ratio along with trace minerals and 4000 U. S. P. units of Vitamin D<sub>2</sub> per teaspoonful.

When used as a supplement to diets low in these substances, it aids in the control of rickets, osteomalacia, poor skeletal development and poor tooth formation. It also helps maintain normal reproduction and lactation.

Available in 1-lb.—5-lb.—25-lb. packages. Dispensed only by or on the prescription of Graduate Veterinarians.



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**Ken-L-Biskit's guaranteed analysis includes these all-important nutrients:**

Protein.....	for its body building function
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Nitrogen-free Extract...the carbohydrates needed for energy	
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### 2. test feed for 30 days on this money-back basis:

Reading about Ken-L-Biskit's nutrients is one thing... but feeding them to your dogs offers the real proof of Ken-L-Biskit's nutritional advantages. That's why we make this test-feeding offer.

Feed three of your dogs Ken-L-Biskit for one month, then note their health, appearance and vigor. If you are not convinced Ken-L-Biskit beats all other dry-type dog foods, write us at the address below. The money you paid for Ken-L-Biskit will be promptly refunded. So act now—get your dogs started on a Ken-L-Biskit feeding program and see how they thrive.

- ★ Extra rich in the protein of both meat meal and liver meal.
- ★ Packed with the vitamins, minerals and other nutrients essential to dog health.
- ★ Real meat meal gives it the sniff appeal dogs love.
- ★ Mixes easily. Doesn't stick to roof of dog's mouth.
- ★ Thrifty! In 50, 25, 4 and 2 lb. sizes at your dealer's.

## KEN-L-BISKIT

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KEN-L-PRODUCTS DIVISION

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## Ranch Record Veterinary Syringe



Superior quality veterinary syringes—Choice of ground glass barrel with metal plunger or rubber packing—Accurate dosage and smooth operation always assured.

Inexpensive replacement parts available.

Inquire at your nearest veterinary dealer or wholesaler concerning this outstanding product.

Sizes 2 cc. to 40 cc.

## Boston Record Syringes

High quality syringe consisting of graduated, ground, resistance glass barrel with nickel silver plunger and strongly constructed metal parts. No Washers—No Binding Rubber Packings to interfere with smooth operation. Easily disassembled for sterilization.

### Low In Cost

Boston Record Syringes create sales for the dealer and satisfaction for the user.

Repair exchanges available.

Sizes 1 cc. to 150 cc.



Literature Upon Request

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50 Thayer St., Boston 18, Mass.

(CLASSIFIED ADS—continued from p. 40)

### Wanted—Practices

Graduate of AVMA-approved school, six years' experience, desires position in small animal practice. Would lease with option to buy. California only; married, veteran. Address "Box F 6," c/o JOURNAL of the AVMA.

Busy mixed practice wanted in Pacific Northwest by experienced married veterinarian. Address "Box F 22," c/o JOURNAL of the AVMA.

Would like to contact veterinarian, or any one interested in livestock trade as side line, in the South where grazing is outstanding. Address "Box H 11," c/o JOURNAL of the AVMA.

### For Sale or Lease—Practices

Private owner offers business zoned home, and location suitable for residence and small animal hospital. Town, 12,000, suburban St. Louis. No competition. Quick sale wanted. Address Box 187, O'Fallon, Mo.

A golden opportunity for veterinarian who wishes to semi-retire in California. New home with small hospital for sale and a good net with little work. Terms. Address "Box G 20," c/o JOURNAL of the AVMA.

New brick hospital for sale in southern state. Winters mild, practice not strenuous. 70% small animals; big future in dairy work. Net \$10,000 first year. Very little early morning and night work. \$12,500 to handle, balance \$150 per month. Address "Box D 7," c/o JOURNAL of the AVMA.

Completely modern, 50-kennel small animal hospital for sale in Rocky Mountain region. Established seven years. Also facilities for large animal hospitalization and surgery. Other interests reason for selling. Address "Box D 21," c/o JOURNAL of the AVMA.

Southern California small animal hospital now at one-man capacity, for sale or lease with option to buy. No real estate. Low price, lenient terms. Address "Box W 17," c/o JOURNAL of the AVMA.

(Continued on p. 52)

## SAVE as much as 50% on your important EQUIPMENT NEEDS

**Reconditioned and Guaranteed EQUIPMENT such as:**  
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A Time-tested Colloidal Sulfur in a Patented Water-Miscible Oil



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## *Advantages*

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Sold in 8-oz. bottles designed for  
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Available to Graduate Veterinarians  
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| 4. Prince George  | 9. Westminster  | D. Hart House           | H. Union Station          |
| 5. Royal York     | 10. Park Plaza  |                         |                           |
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# HOTEL RESERVATIONS — TORONTO CONVENTION

Ninetieth Annual AVMA Meeting, July 20-23, 1953

All requests for hotel accommodations will be handled by a Housing Bureau in cooperation with the Committee on Local Arrangements. The Bureau will clear all requests and confirm reservations.

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HOTEL	SINGLE	DOUBLE	TWIN BEDS
1. The Barclay	\$4.50 up	\$6.00-8.00 up	\$7.50-8.50 up
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4. Prince George	\$4.50 up	\$6.50 up	\$6.50 up
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7. Walker House	\$4.00	\$7.00	\$7.00
8. Waverley	\$3.50 up	\$6.50-7.50	\$7.00
9. Westminster	\$5.00 up	\$6.00 up	\$6.00 up
10. Park Plaza	\$7.00-9.00		\$10.00
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Cut Off Here

## HOTEL RESERVATION FORM — AVMA CONVENTION

To: Housing Bureau, Toronto Convention & Tourist Assn.,  
30 Bloor Street, West, Toronto 5, Ontario

Date .....

Please make reservations indicated below:

(Three Choices MUST Be Shown)

First choice hotel .....

Second choice hotel .....

Third choice hotel .....

Accommodations and Rates Per Day Desired:

☐ Single room at \$.....

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Arriving on (date) .....at.....a.m.....p.m.

Leaving on (date) .....at.....a.m.....p.m.

Room will be occupied by (attach list of additional names if necessary). Do not make reservations for others without prior arrangements with them.

Name .....City and State or Province .....

Name .....City and State or Province .....

Your Name (print or type) .....

Street Address .....

City .....State or Province .....

\*Those desiring suites of rooms should send the Housing Bureau complete information as to accommodations and rates desired.

ary Medical Association. The letter states that a copy has been sent to you. I should like to give you the other side of the story.

First: Due to ignorance, I was at fault in advertising in the newspapers in 1946. . . .

Second: Certain statements in the above-mentioned letter of January 28 are incorrect.

. . . The statement that the following quotation is from that advertisement: "at last \_\_\_\_\_ has competent veterinary service," . . . is erroneous. . . . There is no such statement in the article.

Third: I am enclosing for your reference a copy of the newspaper . . . which contains an article on the remodeling done at my hospital. Please note that I do not have any paid advertising whatsoever in the paper. The contractor was instrumental in having the newspaper run the picture and the write-up of the improvements that he had made, as is commonly done by contractors on their building or remodeling jobs.

When a physician remodels or constructs a new clinic, it is not uncommon for the contractor to advertise that he has remodeled or constructed it, stating the improvements made, and showing a picture of the new or remodeled building.

Two of our local veterinarians thought this write-up was good for the profession as a whole, in that it pointed out to the laymen that the

veterinary profession has facilities comparable to those of the allied medical profession.

Personally, I do not see any objection to such publicity. I shall appreciate it if you will give me your viewpoint on the matter.

Yours truly,  
s/H. H. L., D.V.M.

March 9, 1953

Dear Doctor:

Your letter dated February 5 and addressed to this committee at 600 S. Michigan Ave., Chicago, was forwarded to our office on March 3. . . . Before this letter reaches you, your correspondence must be sent to all members of this committee. They in turn must study the material; send a written opinion to this office, and then these opinions must be incorporated into a final letter by the secretary, before this letter can be forwarded to you.

We thank you for writing us and sending us the clippings. We appreciate your explanation of the problem which has arisen over the appearance of the article in the above-mentioned clipping.

As you state, we were in receipt of a copy of a letter addressed to you, dated Jan. 28, 1953, from the \_\_\_\_\_ Association.

(Continued on p. 54)

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AND REPELS SCREW  
WORMS, FLEECE WORMS AND BLOW FLIES.



Corn Belt's new and improved Screw Worm Bomb contains both Lindane and Pine Oil, in a heavy silica aerogel base that furnishes lasting therapeutic action. No finer, more effective formula exists for controlling the screw worm.

The Bomb's new, non-clog trigger is specially suited for releasing this heavy, aerogel spray. Now it is easy, quick, and economical to spray wounds caused by spring and summer surgery, wire cuts, dehorning, dog bites, sheer cuts, docking, etc. And the bomb assures complete sanitation.

*Sold only to the Veterinarian.*



**LOW COST:** *Each bomb gives  
40 treatments & more*

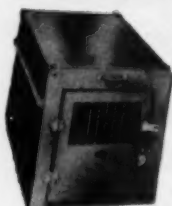
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**"The Genuine" THE BEST BUY**  
 The ONLY PLYWOOD CRATES which hold an  
 aluminum door and have METAL LINED DOORS  
 A ALUMINUM TRIM EDGED. The ONLY  
 ALUMINUM CRATES which have NO CAST  
 ALUMINUM DOOR GRILL — THE ONLY  
 CRATES WITH THE ALUMINUM ANGLE  
 TRIM WHICH WILL NOT BEND OR RUST  
 FREE LETTERING ON ALL CRATES

**IMMEDIATE DELIVERY  
 100 IN STOCK**



**ALL ALUMINUM**



**INDOOR KENNEL**

**5 Compartment Kennels \$169.50**

Water-proof, sheets heavily galvanized, steel. 1 1/2" angle steel welded frames. Doors—9 ga. 1 1/2" steel mesh with steel tubular frame. Assembled complete. 8' 6" high, 6 ft. long, 6 in. off ground. Painted—175 in stock.

Compare before you buy and you will agree that our kennel is excellently constructed, more costlier materials used, cheaper in price and you actually save from \$25.00 to \$75.00 for the same kennel constructed elsewhere. Each compartment has drain gutter, no standing water. All floors are flush for easy cleaning. Over 3,000 satisfied customers.

**Write For Free 16-Page Catalog.**

**DEE-CHICAGO MFG. CO**

Mfg. of Dog Houses, Kennels & Slaughter Boxes. Dept.  
 1000 E. Randolph Ave. Chicago 24, Ill.

**UNSATURATED  
 FATTY ACID  
 CAPSULES**

**EVSCO**

**Soft Elastic Capsules Containing  
 Unsaturated Fatty Acids for the  
 Treatment of Scaly Canine Dermatoses  
 and Dull Hair Coats**

**Formula**

**EACH CAPSULE CONTAINS:**

168 mg. of unsaturated fatty  
 acids, principally Linoleic  
 and Linolenic, prepared  
 from refined Linseed Oil.

**Easy to dispense.**

Capsules are 3 minim size  
**1000 — \$7.90**

**ETHICAL  
 VETERINARY  
 SUPPLY CO.**

Available Thru Your Veterinary  
 Supply Dealer Or Write Direct.  
 Catalog Sent Upon Request.

**34-28 31st STREET  
 Long Island City 6, N. Y.**

(CLASSIFIED ADS—continued from p. 46)

Long-established 60-40 mixed practice for sale in the Southeast grossing \$65,000 annually. Beautifully equipped new brick 54-cage hospital with air-conditioned home combined. Will sell real estate and equipment, including x-ray, 2-way radio, auto-clave, normal inventory, kennels, for \$75,000. Am retiring. Requires two men. Third down and balance monthly at 4%. Will not lease. Address "Box F 5," c/o JOURNAL of the AVMA.

Beautiful ranch style home with clinic for sale. Mixed practice; expansion unlimited. Southern California resort town. Sell for real estate value. Terms. Address "Box F 13," c/o JOURNAL of the AVMA.

**Remittance must accompany advertisement**

Veterinary clinic for sale in northwestern Arkansas. Available for purchase August 1, 1953; 80% large, 20% small. Grossed \$11,000 in first year—60% net. College town of 5,000. Price, \$2,500, including medicine and equipment. Reason for leaving, health. Address "Box G 8," c/o JOURNAL of the AVMA.

Combination small animal hospital and boarding kennel for lease, 30 runs, 6-room residence, West Texas city of 55,000. Grossing, \$13,000; sell drugs, instruments, equipment. Address "Box G 15," c/o JOURNAL of the AVMA.

Lucrative mixed practice for sale in southern California; includes new brick home with small animal clinic. \$10,000 down and balance monthly at 6% interest. Total price, \$29,500. Address "Box G 22," c/o JOURNAL of the AVMA.

Veterinary hospital and contents in South, for sale or lease. Has living quarters; owner retiring. No blue sky. Will sell contents and lease hospital. Address "Box H 1," c/o JOURNAL of the AVMA.

Small animal practice for sale in Chicago, including about \$7,000 worth of all new equipment. Capable of grossing in excess of \$30,000. Owner expects to be drafted soon. \$5,000 down payment will handle. Excellent building, favorable lease; large modern apartment available. Address "Box H 3," c/o JOURNAL of the AVMA.

(Continued on p. 56)

**TAMM UDDER SUPPORTS**



**Prevent caking,  
 Bruises, Self  
 sucking,  
 Smashed teats.**

Waterproof bag serves as a container for medicinal solutions. Three sizes, *small*, 900-1100 lb. cows; *medium*, 1100-1600 lb. cows; *large*, over 1600 lb. cows.

Price, \$17 retail.  
 Professional discount, 30%.  
 Write to Dept. VI

**FRANKSVILLE SPECIALTY CO.,  
 Franksville, Wis.**



**FROM  
SWAB  
TO  
MOP**

**Bactine®**  
BRAND

**GERMICIDE  
FUNGICIDE  
DEODORIZER**



#### **SUPERIOR SAFETY**

- ... will not cause inflammation of the gastrointestinal tract due to licking
- ... does not contain iodine, mercury or phenol
- ... relieves itching, discourages scratching
- ... can safely be recommended for home or farm use
- ... pleasant to apply, does not sting or dry skin on hands
- ... sanitizes and deodorizes

#### **EXTRA EFFICACY**

- ... residual antibacterial and antifungal action lasts for hours on hands, skin, equipment and glass, metal, tile, plastic and enamel surfaces
- ... penetrates deeply into pores, cracks, abrasions
- ... has fresh, clean odor
- ... destroys odors, does not mask them
- ... does not stain—is not greasy

- topical germicide
- cuts—burns—abrasions
- fungus infections
- obstetrical preparation
- wet dressings
- skin irritations
- operative antisepsis
- preparation for injections
- hand disinfection
- instrument disinfection
- disinfecting, deodorizing cages
- disinfection of thermometers
- disinfection of syringes

**Bactine:** Available in 1-gallon, 1-pint and 6-ounce bottles through your regular supplier or we will assist you in ordering.

**MILES LABORATORIES, INC • ELKHART, INDIANA**

7503

# M·A·C

+ QUICK AND SAFE +



in treating Splints,  
Spavins, Curbs, Side-  
bones, Inflamed Ten-  
dons, Bursal Lame-  
ness, Etc.

Single Bottle . . . \$2.00  
3 and 1 free . . . 5.00  
6 and 2 free . . . 9.00  
12 and 4 free . . . 17.00  
24 and 4 free . . . 28.00

## Advantages of using "M.A.C."

Can be applied in a few seconds.  
Only one application in 24 hours.  
Does not irritate the skin.  
More prompt than blisters.  
More humane than firing.

Write for Descriptive Price Sheet  
of Veterinary Dispensing Products.

**CARTER-LUFF CHEMICAL CO.**  
Hudson, N. Y.

## Kennel Cage Units

of Wire Mesh and Metal

IN TWO TIERS: 4, 6, and 8 cage units  
IN THREE TIERS: 6, 9, and 12 cage units  
Sanitary, durable, and easily maintained;  
galvanized materials; removable pans; hand  
woven wire mesh doors, maximum light  
and ventilation; sized for dogs and cats;  
removable partitions; shipped crated; easily  
assembled.



THE EIGHT CAGE UNIT  
manufacturers

**EAST RIVER WIRE WORKS**

39-40 Twenty-first St., Long Is. City 1, N.Y.

(CORRESPONDENCE—continued from p. 50)

You have requested an opinion of the AVMA Committee on Ethics regarding the appearance of this article and the congratulatory insertion, made by the contractor and subcontractors, on the completion of the remodeling of your hospital.

Referring to the second paragraph in your letter, you state, "Due to ignorance, I was at fault in advertising in the newspapers in 1946." Unfortunately, most of the errors which are made regarding the principles of veterinary medical ethics are due to the lack of knowledge or understanding of this important subject in veterinary medicine. And, we are sorry to say that others, especially those in business, do not understand that veterinary medicine is a branch of one of the three recognized professions—medicine, which is governed by a set of principles known as ethics.

Often, persons outside of our profession do things for members which they believe to be all right but, which in the eyes of the profession . . . tend to cause embarrassment.

Perhaps Mr. \_\_\_\_\_ and the others in this instance, did mean right. But we can not agree that this is an ethical means for a business man to "advertise" himself, when the good name of a professional man and a profession as a whole are placed in the balance. Assuming that the contractor did want to be nice in offering these congratulations to you and, at the same time, show what a splendid job of remodeling he did, it seems that he carried the idea just a little too far, when he made a splurge of approximately one-quarter of a page in the newspaper.

To climax the "advertising" on the part of the contractor, we believe that it was unethical and ill chosen to have included the "office hours" of the veterinary hospital in the insertion.

To bring the matter to a conclusion, we believe this type of insertion on the part of business people, whether intentional or unintentional, as a means of advertisement for a professional office or hospital, to be unfortunate.

It has the inuendo of advertising on the part of the professional person involved. We believe it does not do the profession as a whole any good,

(Continued on p. 58)

**BROKEN TEETH**

—repaired in bottom clipper blades.  
Top and bottom blades sharpened to  
match. Save money—Guaranteed.  
Prices on Request

HIGHLY SPECIALIZED SHARPENING  
Sales—Repairing on Oster  
and Stewart clippers.

Sharpened Blades Tested on Rabbit Fur

OSTER A-2 \$75

STEWART \$1.00

Prompt Service—Est. 17 years

MAIL TO:

NEWFOUNDLAND 9-3412

**CLIPPER SERVICE**

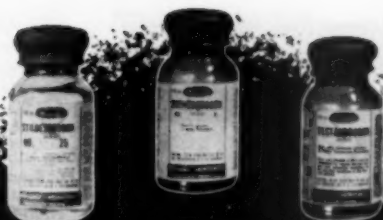
FUNCTIONAL ABORTION

IMPOTENCY

ANESTRUS

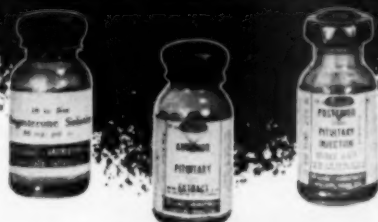
SHY BREEDERS

FUNCTIONAL STERILITY



*Headquarters for*

## HORMONES



### 9 OUT OF 10 VETERINARIANS RE-ORDER ARNOLD PHARMACEUTICALS

#### STILBESTROGEN

	Each	Six	Dozen
No. 25 10 cc. 25 mgm./cc.	\$ 1.90	\$ 8.40	\$18.00
No. 25 30 cc. 25 mgm./cc.	2.70	14.58	27.00
No. 10 30 cc. 10 mgm./cc.	1.48	7.83	14.50
No. 10 60 cc. 10 mgm./cc.	2.45	14.31	26.50
No. 4 60 cc. 4 mgm./cc.	1.50	8.10	15.00

#### DIENESTROGEN

	Each	Six	Dozen
10 cc.	\$ 1.00	\$16.20	\$30.00

#### TESTANDROGEN

	Each	Six	Dozen
10 cc. vial	\$ 1.00	\$ 6.64	\$16.00
10 mgm./cc.	2.60	14.04	26.00

#### PROGESTERONE

	Each	Six	Dozen
10 cc. vial	\$ 2.00	\$10.00	\$20.00

#### ANTERIOR PITUITARY

	Each	Six	Dozen
10 cc. vial	\$ 1.50	\$ 8.10	\$15.00

#### POSTERIOR PITUITARY

	Each	Six	Dozen
10 cc. vial	\$ 1.75	\$ 9.45	\$17.50
Double U.S.P.			

ORDER TODAY

*Arnold*

**STILBESTROGEN**—(Diethyl Stilbestrol *plus* Estradiol Alpha, the most potent of all estrogens). Suggested Uses: Induce estrus, expel retained placenta, expel mummified fetus, evacuate pus in uterus, incontinence in spayed bitches.

**DIENESTROGEN**—(5 mgms Dienestrol per cc). For the Non-settling, shy breeding cow that comes in heat regularly but fails to conceive due to insufficient estrogens. Dosage: 1 cc at first sign of heat. 2 cc for larger cows.

**TESTANDROGEN**—(Testosterone Propionate). Possesses the masculinizing properties attributed to the male sex hormone.

**Indications:** Impotency of glandular origin, cryptorchidism testicular deficiency, benign prostatic hypertrophy, inhibition of lactation and breast carcinoma.

**PROGESTERONE**—An oil solution of the corpus luteum stimulating hormone. Indicated for threatened and habitual abortion or functional sterility resulting from corpus luteum insufficiency.

**ANTERIOR PITUITARY**—Each cc contains the aqueous extract from 18.5 grains of fresh anterior pituitary. Experiments reported indicate the following uses: Agalactia of brood sows, supportive treatment in bovine ketosis, increase milk secretion in certain cases of decreased flow following parturition.

**POSTERIOR PITUITARY**—(Double U.S.P.). **Indications:** Dystocia due to uterine inertia. Help control uterine hemorrhage following parturition. Some veterinarians use it for sows refusing to nurse their pigs and those showing cannibalism.

## LABORATORIES

P. O. BOX 111A—NEW CASTLE, INDIANA



*Try*

## MASTYN

### Udder Infusion Ointment

Each 20 gram udder tip tube contains:

Procaine penicillin 100,000 units

Dihydrostreptomycin 100 mg.

Sulfanilamide 30 gr.

Sulfathiazole 30 gr.

Free-flowing oil base

Bigger tube — Easier to handle

Larger volume permits thorough dispersion of medicaments

Higher Sulfa content — 60 grains per tube

Packaged in cartons of 6 tubes

6 tubes @ 50c ... 3.00    dozen @ 45c .... 5.40

6 dozen @ 42½c 30.60    gross @ 40c .... 57.60

Select Pharmaceuticals for  
the Veterinary Profession  
since 1918

**CURTIS FOLSE**  
*laboratories*

KANSAS CITY, KANSAS

## DE LUXE CAGES



### IMPROVED 7-CAGE DE LUXE DRAIN UNIT

Also available in removable tray style, or plain, flat floor style in 3, 5, 7, or 12 cage units.

Note new style Bar Doors — Door frames, top and bottom, made of 1 inch tubes; water runs off instead of remaining on door frame.

### IMPROVED DOG DRYER WITH ENTIRELY TRANSPARENT DOORS

Write for NEW cage booklet; also dryer folder

The 1953 price list is now available

**Baltimore Wire & Iron Works**  
514 N. Jasper Street    Baltimore 1, Maryland

(CLASSIFIED ADS—continued from p. 52)

Large animal dairy practice for sale in small agricultural community in northern Illinois. Grossing \$25,000. Modern seven-room home and two-car garage. Price \$21,000. Address "Box H 5," c/o JOURNAL of the AVMA.

Established 80 small — 20 large mixed practice for sale in suburban area of Connecticut. Completely equipped modern brick small animal hospital, \$40,000. Address "Box H 6," c/o JOURNAL of the AVMA.

Small animal hospital in Florida, lower east coast, for sale or lease, with option to buy. Details furnished upon request. Address "Box H 10," c/o JOURNAL of the AVMA.

Small animal hospital and 6-room ranch house on 1 acre for sale in Midwest city of 140,000. Cattle practice available. \$25,000, 75% real estate value. Retiring. Address "Box H 12," c/o JOURNAL of the AVMA.

Mixed practice for sale in Ontario, \$12,000. Includes modern bungalow, clinic, and office facilities. Situated on busy highway in vacation area. Address "Box H 13," c/o JOURNAL of the AVMA.

For sale, lease, or rent—hospital, equipment, and practice in Kalamazoo, Mich. Good opportunity. Address "Box H 14," c/o JOURNAL of the AVMA.

For lease, with option to buy, well-established, attractive, fully-equipped (including x-ray) small animal hospital located in Maryland. Seven-room house adjoining hospital. Address "Box H 15," c/o JOURNAL of the AVMA.

Small animal practice and modern, fully equipped hospital for sale in North Carolina. For details address "Box H 16," c/o JOURNAL of the AVMA.

### Wanted to Buy

Wanted—canine operating table and microscope. Give price and description in reply. Address S.P.C.A. of Clearwater, Fla., Mrs. Robert Warner, Secretary.

### Miscellaneous

Artificial insemination instruments. Disposable obstetrical sleeves 20c each. Package of 20 including detachable chest band — \$5, postpaid. Samples and complete catalog on request. Breeders Equipment Co., Flourtown, Pa.

Dr. Fritz Volkmar, 1929 Irving Park Rd., Chicago 13, Ill., wishes to exchange his veterinary medical bookplate (*ex-libris*) with that of other veterinarians. Correspondence invited.

(Continued on p. 60)



Send for FREE 36-page Treatise on  
**CARROT OIL VITAMINS**

Details the advantages of carrot oil vitamins when used in feeds to improve breeding results; to destroy oxidized milk flavors; and to promote general good health and glossy coats. Contains much information. Replete with data and references. Send for it today

**NUTRITIONAL RESEARCH ASSOCIATES**  
Dept. 251-M, South Whitley, Indiana

## Instructions to Authors

*Journal of the AVMA*

and the

*American Journal of Veterinary  
Research*

**Exclusive Publication.**—Articles submitted for publication are accepted with the understanding that they are not submitted to other journals.

**Manuscripts.**—Manuscripts must be typewritten, double-spaced, on 8½ by 11 in. bond paper, and the original, not the carbon copy, submitted. One-inch margins should be allowed on the sides, with 2 in. at top and bottom. Articles should be concise and to the point. Short, simple sentences are clearer and more forceful than long, complex ones. Footnotes and bibliographies also should be typed double space and should be prepared in the following style: name of author, title of article, name of periodical with volume, month (day of month, if weekly), and year.

**Illustrations.**—Photographs should be furnished in glossy prints, and of a size that will fit into the Journals with a minimum of reduction. Photomicrographs which cannot be reduced should be marked for cropping to 1-column or 2-column width. Drawings should be made clearly and accurately in India ink on white paper. Figures appearing on graphs or charts should be large enough to allow for reduction necessary for the chart or graph to fit on Journal pages. All illustrations should bear the name of the author on the back.

**Tables.**—Tables should be simple and typed double-space. Complex tables are not conducive to perusal. It is wiser to summarize complex material rather than to attempt to tabulate it.

**News.**—Secretaries of associations and readers are requested to send us announcements of meetings and news items.

**Anonymous Letters.**—Anonymous communications, of whatever nature or purpose, to the JOURNAL or to the Association will not be published or referred for consideration to any Association official or committee.

AMERICAN VETERINARY MEDICAL  
ASSOCIATION

600 So. Michigan Avenue  
Chicago 5, Illinois



### Castle "669"

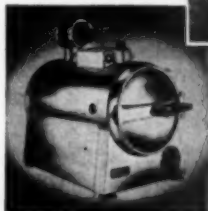
Autoclave—and Boiler

Both fully automatic, cast in bronze. Lighted double cabinet. Four glass shelves. Non-rust aluminum base.

### Castle "46"

Specialist's Light—

Free-swinging light rotates to any position. Off-set arm centers light over table. Adjusts from 4' to 6'-3". Cream enamel; brown base. 4 casters.



### Castle "777"

Speed-Clave Sterilizer

Fully automatic. Autoclave sterilization of instruments, gloves, dressings in 4 to 7 min. Weighs 15 lbs.

## Mail coupon for Free Folder on Lights and Sterilizers

... that make work easier in  
the small animal hospital

Large hospital or small, Wilmot Castle has a complete line of lights and sterilizers to help your veterinary practice.

Send for free folder on Castle lights and sterilizers . . . and see how they can make work easier in your clinic or hospital.

to: Wilmot Castle Co.

11398 University Ave., Rochester 7, N. Y.

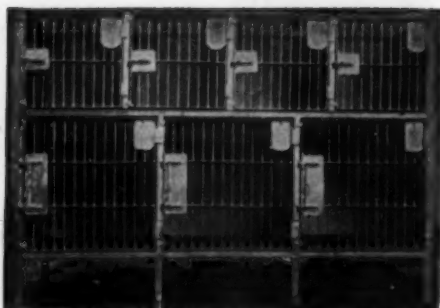
- ☐ Send free folder on lights and sterilizers  
☐ I'd like a representative to call

Name

Address

City  State

**Castle** LIGHTS AND  
STERILIZERS



#### **RIVERSIDE ALL STEEL KENNELS—QUALITY FIRST**

Seven Compartment. Upper tier 22x20x30. Lower tier 26x26x30. Five Compartment. Upper tier 22x20x30. Lower tier 27x31x30. Sliding doors may be installed between openings for extra large cages if desired. MINOR CHANGES IN DESIGN AND EQUIPPED WITH 3-inch ball bearing CASTERS AT NO EXTRA COST. Foolproof latches and identification tags on steel barred doors. Bottom cages have six-inch ventilating strip. Shipment FOB our plant.

Send For  
Descriptive Literature

TERMS MAY BE ARRANGED IF DESIRED

*A lifetime of service and guaranteed by one of  
California's oldest iron works.*

#### **RIVERSIDE IRON WORKS**

3422 Mission Blvd.

Riverside, California

#### **DIRECT HEAT ELECTRIC**

**B**

#### **BRANDING IRON**



**QUICK  
CLEAN  
FULL HEAT**

**NICHOLSON MANUFACTURING, Inc.**

**Veterinary Supplies**

2540 E. 3rd Ave.

Denver 6, Colo.

(CORRESPONDENCE—continued from p. 54)

and whether purchased or given free, it may be construed as a means of advertising, upon which our principles of veterinary medical ethics frown.

It is our duty as a committee to educate the members of our profession to what is considered proper and improper in the field of professional advertising. We conclude that the articles as presented by you . . . and the Veterinary Medical Association are unprofessional and unethical. We believe they were placed in the newspaper without the knowledge that they might be in violation of the principles of veterinary ethics. We recommend that this type of insertion be refrained from, by all members of our profession, at all times.

Again, we thank you for your correspondence. If there is anything that we have not made clear in this matter, we would be pleased to hear further from you. As a committee, we stand ready to assist at any time. We would prefer that members of our profession give us an opportunity to advise on matters of veterinary medical ethics before they are entered into, rather than afterwards. This often leads to a clearer understanding, without some of the embarrassment which attends most of these problems.

Very sincerely yours,

AVMA COMMITTEE ON ETHICS

s/Raymond C. Snyder, V.M.D.,  
Secretary.

• • •

The following letter from Dr. Stanton Youngberg, Rt. 2, Grove City, Mo., will be of interest to his many friends.—ED.

April 3, 1953

Dear Dr. Hardenbergh:

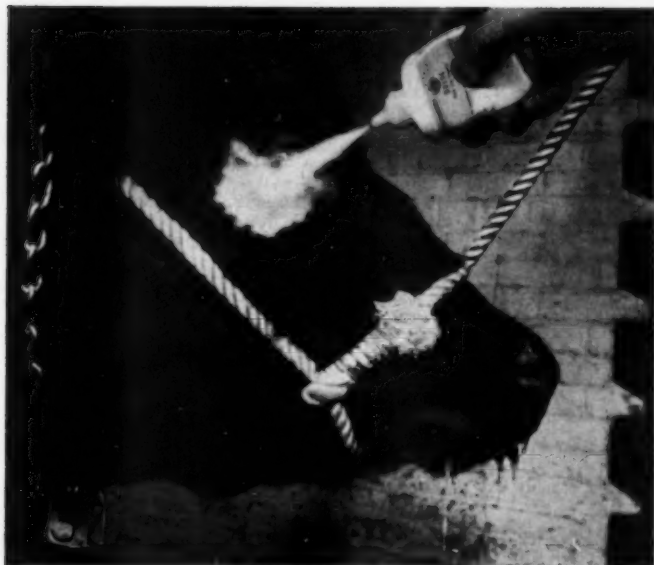
I sincerely hope that you will find it in your heart to forgive me for such an unseemly delay in acknowledging the signal honor that was conferred upon me by the American Veterinary Medical Association in electing me a life member.

As you may know, I suffered a coronary occlusion while interned by the Japanese in Manila and this, combined with the malnutrition of the war years, has left me more or less of an invalid. My correspondence has suffered terribly and I have a big stack of letters that I have not as yet worked up the energy to answer.

Will you kindly convey to the Executive Board my heartfelt appreciation of their generous action in conferring upon me a life membership? I consider this a very great honor and feel very humble in having been chosen. I will cherish the honor and the spirit in which it was given as long as I shall live. My pride in my profession increases with every passing year.

Again, thanking you, and with my kindest personal regards, I am

Very sincerely,  
s/Stanton Youngberg



**FOR  
PINK  
EYE**

## 3 antibacterials in 1 puff

Bovoc® pink eye powder, containing tyrothricin (0.05%), sulfanilamide (78.95%), sulfathiazole (20.0%), and Phenacaine HCl (1.0%), is as simple to use as it is effective in controlling keratitis of cattle.

Bovoc is supplied in a practically indestructible plastic insufflator—will withstand 10,000 squeezes without breaking. The spray head of the insufflator delivers an accurate, even flow of uniformly fine Bovoc pink eye powder.

Bovoc pink eye powder contains a mixture of three antibacterial agents, for maximal control of mixed infections, with Phenacaine HCl included in the formula for its topical anesthetic action.

No. 2121—Bovoc pink eye powder, supplied in improved plastic insufflator containing 10 Gm., with detachable label for convenient dispensing. Sharp & Dohme, Veterinary Division, Philadelphia 1, Pa.

Veterinary Division



Philadelphia 1, Pa.

**BOVOC**<sup>®</sup>  
PINK EYE POWDER

**The AVMA Will Pay 25  
Cents Plus Postage for  
Each Copy of the  
Following:**

- **JOURNAL OF THE AVMA—  
Jan., 1950, Jan., 1951  
Mar., 1952, Mar., 1953**
- **AMERICAN JOURNAL OF  
VETERINARY RESEARCH—  
April, 1950, April, 1951**

**AMERICAN VETERINARY MEDICAL  
ASSOCIATION  
600 S. Michigan Ave.  
Chicago 5, Ill.**



Provides an accurate pattern against which to cut with knife or razor blade. Fits firmly, cannot move or slip when clamped into position. Made of non-rusting, light, cast aluminum, highly polished. Lasts a lifetime with minimum care. Simplicity of design and construction reduces possibility of breakage or mechanical failure. Forms immediately available to provide distinctive marking of these breeds:

- Boxer — postpaid \$15.00
- Boston Terrier — postpaid \$15.00
- Great Dane — postpaid \$15.00
- Doberman — postpaid \$15.00
- Set of above four — postpaid \$50.00

These patented "championship" forms are patterned after markings of winners of top honors in show competition. Forms for other breeds made on special order. Sold to veterinarians only. Send check or money order.



**MacALLAN LABORATORIES**  
Route No. 2, Box 420      Lansing, Michigan

(CLASSIFIED ADS—continued from p. 56)

Printed to order—200 letterheads, \$2.00; 200 No. 10 envelopes, \$2.50; 200 6 3/4 envelopes, \$2.00; 1,000 business cards, \$4.50. All postpaid. Regal Printing Co., Crooksville, Ohio.

For your office wall—charts at \$1 each (3 for \$2)—All American Breeds. World Dog Map. Keep up on dogs through *Dog World* magazine, \$3 year; 5 years, \$10. Judy Publishing Co., 3323 Michigan Blvd., Chicago 16, Ill.

Catering to the profession—adhesive tape, premium quality 12 in. by 10 yds., \$3.25; thermometers, unconditionally guaranteed, \$6.00 doz.; other items on request. Healing Arts Supply Co., 375 E. Fordham Rd., New York 58, N. Y.

For sale—Universal portable x-ray with 5-7 hand fluoroscope. Has been factory checked. Readily disassembled and carried in small leather case. \$210. Address Dr. J. P. McEvoy, 13621 W. Eleven Mile Road, Oak Park 37, Mich.

**Clipper Blade Sharpening**

Have your Clipper Blades sharpened by an expert with 28 years of practical factory training. We know how your blades must be ground to cut like new. Also clipper repairing. All work guaranteed to satisfy you or money back. Now serving veterinary colleges, and over 500 satisfied veterinarians. Why not you? 24-hour service. We ship insured prepaid. Avoid C.O.D. charges; enclose 75c for each set with blades. We are headquarters for Sunbeam Stewart labor-saving equipment, Allover, and Oster quality clippers and blades. Write for information on Oster, Stewart, and Allover quality clippers and products. Service Grinding and Supply Co., 903 Chicago St., Racine, Wis.

**Remittance must accompany advertisement**

**Bovine Prolapse Preventer** — Payton Utero-Vaginal Prolapse Preventer. Quickly, easily applied to any size cow. Positive protection. Re-usable, non-irritating, sanitary. Noninterference with placenta release. Excellent for vaginal protrusion; dispensing. See article *JOURNAL of the AVMA*, December, 1951. Only \$3.00; two for \$5.00; six for \$12.00. Prepaid. Dr. Jerome Payton, Morris, N.Y.

**REGISTERED      BURDIZZO      TRADE-MARK**



**BLOODLESS CASTRATOR**

ELIMINATES CASTRATION LOSSES — NO INFECTIONS — NO SHRINK — NO SCREW WORM RISKS!  
**HAYER-GLOVER LABORATORIES, KANSAS CITY, MO.**

Sole Makers: LA "BURDIZZO" CO.  
Corso Sebastopoli 187—TURIN (Italy)

# He Fought Three Days and Nights



*Lieutenant Colonel  
Raymond G. Davis, USMC  
Medal of Honor*

COLD, BATTLE-WEARY, the Marines were re-deploying toward Hungnam. A rifle company was guarding a mountain pass vital to the withdrawal of two regiments. The company became surrounded. If help didn't come, 6,000 men were lost.

Into this situation, Lieutenant Colonel Davis boldly led his Marine battalion. Over eight miles of heavily defended icy trail they attacked, and across three ridges deep in snow.

They fought three days and nights.

But finally Colonel Davis reached and freed the company. He opened the pass and held it till the two regiments got by. Then, fighting through the last of the enemy and carrying his wounded with him, he led his own gallant battalion into safety.

"Korea and World War II have taught me," says Colonel Davis, "that courage is common to *all* armies; it's the *better equipped* side that has the edge. You're giving *our* men that edge every time you invest in a Defense Bond. For Bonds, which are personal savings for you, are also muscle for America's economy. Helping produce *better* equipment to protect the brave men who are protecting us all."

Peace is for the strong! For peace *and* prosperity  
save with U. S. Defense Bonds!

**Now E Bonds pay 3%!** Now, improved Series E Bonds start paying interest after 6 months. And average 3% interest, compounded semiannually when held to maturity! Also, all *maturing* E Bonds automatically *go on* earning—at the new rate—for 10 *more* years. Today, start investing in U.S. Series E Defense Bonds through the Payroll Savings Plan at work.



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in an  
uncertain situation  
depend on



# PEMEPHRINE

(Pentamethylene tetrazol  
supported by Ephedrine)

Cardio-vascular weakness or respiratory failure often happens without warning. Ample preparation for such emergencies is prompt-acting PEMEPHRINE. The immediate action of this safe, dependable heart, respiratory and central-nerve stimulant gives confidence in times of emergency. It has this important function also in post-operative treatment by counteracting anesthesia.

The active ingredients of this powerful stimulant are Pentamethylene tetrazol and Ephedrine hydrochloride. Supplied in 30 cc. and 125 cc. puncture seal bottles.

HAVER-GLOVER  
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LABORATORIES  
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Coast to Coast Service

100 c.c.  
**ANTI-CANINE  
 DISTEMPER SERUM**  
 and  
**ANTI-INFECTIOUS  
 CANINE  
 HEPATITIS SERUM**  
 Homologous  
 Pasteurized

Prepared from the blood of dogs hyperimmunized against the viruses of canine distemper and infectious canine hepatitis, and given repeated injections of antigens of the following organisms:

*Salmonella typhimurium* and  
*choleraesuis*  
*Brucella bronchiseptica*  
*Streptococcus cerebritis canis*

**INDICATIONS:** For the prevention and treatment of canine distemper and infectious canine hepatitis.

**ASHE LOCKHART, Inc.**  
 Kansas City, Mo.  
 U. S. Veterinary License  
 No. 191



*Wide Range  
 of Protection*

*Greater  
 Safety*

*Reliability*

**ASHE LOCKHART, INC.**

800 WOODSWETHER ROAD

KANSAS CITY 6, MISSOURI



Now! Field-proved Tympanol (Jen-Sal)  
has **increased** activity in frothy bloat

Five years ago, TYMPANOL introduced an entirely new approach to frothy bloat control. Extensive clinical usage confirms the practical effectiveness of TYMPANOL's polymerized methyl silicone in dissipating frothy bloat.

TYMPANOL's effectiveness has now been increased. Surface tension-increasing activity is stepped up five times, which means that a 50 cc. dose will handle most cases, and a 100 cc. vial supplies maximum antifrothing action for large animals or resistant cases.

Each 100 cc. vial of TYMPANOL (Jen-Sal) now contains 2.5 grams of methyl silicone in a new, free-flowing, quick-diffusing base. Packaged in boxes of twelve, 100 cc. vials.

Administer TYMPANOL with Jen-Sal's special spray-type rumen needle (JS 3621) for best results.

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